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Jun 79

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DEPARTMENT OF THE INTERIOR
March 3, 1849

1879 · CENTENNIAL · 1979

Water Resources Data for Oregon

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OR-78-1

WATER YEAR 1978

Prepared in cooperation with the Oregon Water Resources Department and with other agencies

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SPRINGFIELD, VA. 22161

CALENDAR FOR WATER YEAR 1978

1977

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Prepared in cooperation with the Oregon Water Resources Department and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

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Portland, Oregon 97208

1979

PREFACE

This report was prepared by the U.S. Geological Survey in cooperation with the State of Oregon and with other agencies by personnel of the Oregon district of the Water Resources Division under the supervision of S. F. Kapustka, District Chief, and W. H. Robinson, Regional Hydrologist, Western Region.

This report is one of a series issued State by State under the general direction of J. S. Cragwall, Jr., Chief Hydrologist, and G. W. Whetstone, Assistant Chief Hydrologist for Scientific Publications and Data Management.

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Water resources Data for the 1978 water year for Oregon consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality in wells and springs. This report contains discharge records for 278 gaging stations; stage only records for 10 gaging stations; stage and contents for 44 lakes and reservoirs; water quality for 85 gaging stations, and water levels for 95 observation wells. Also included are 91 crest-stage partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and co-operating State and Federal agencies in Oregon.

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LETTER AFTER STATION NAME DESIGNATES TYPE OF DATA:
(D) DISCHARGE, (E) ELEVATION OR CONTENTS, (C) CHEMICAL,
(B) BIOLOGICAL AND MICROBIOLOGICAL, (T) WATER TEMPERATURE,
(S) SEDIMENT, (J) TURBIDITY

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WATER RESOURCES DATA FOR OREGON, 1978

INTRODUCTION

Water resources data for the 1978 water year for Oregon consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water-levels and water quality of wells and springs. This report contains discharge records for 278 gaging stations; stage only records for 10 gaging stations; stage and contents for 44 lakes and reservoirs; water quality for 85 gaging stations, and water levels for 95 observation wells. Also included are data for 91 crest-stage partial-record stations. Locations of these sites are shown on figures 2, 3, 4, and 5. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements and analyses. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Oregon.

Records of discharge of streams, and contents (or stage) of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through water year 1960, these water-supply papers were in an annual series and then in a multi-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Records of ground-water levels are published from 1935 to 1974 in a series of water-supply papers entitled, "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from the Branch of Distribution, U.S. Geological Survey, 1200 Eads Street, Arlington, VA 22202.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published as an official Survey report on a State-boundary basis. These official Survey reports carry an identification number consisting of the two letter State abbreviation, the last two digits of the water year, and volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report OR-78-1." For archiving and general distribution, the reports for water years 1971-74 are also identified as water-data reports. These water-data reports are for sale, in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Additional information, including current prices, for ordering specific reports may be obtained from the District chief at the address given on the back of the title page or by telephone (503) 231-2009.

COOPERATION

The U.S. Geological Survey and organizations of the State of Oregon have had cooperative agreements for the systematic collection of surface-water records since 1905. Organizations that supplied data are acknowledged in station descriptions. Organizations that assisted in collecting data through cooperative agreements with the Survey are:

Oregon Water Resources Department, James E. Sexson, Director.

Oregon Department of Fish and Wildlife, John R. Donaldson, Director.

Oregon Department of Transportation, Highway Division, H.S. Coulter, State Highway Engineer.

Coos, Douglas, Lane, Multnomah Counties, and Clark County, Washington.

Cities of Coos Bay-North Bend, Corvallis, Eugene, Lakeside, McMinnville, Medford, Portland.

Rogue Valley Council of Governments.

Burnt River Irrigation District.

Umatilla Tribal Council.

Warm Springs Tribal Council.

Assistance in the form of funds or services was given by the Forest Service, Soil Conservation Service, U.S. Department of Agriculture; Corps of Engineers, U.S. Army; Bonneville Power Administration, Bureau of Reclamation, Fish and Wildlife Service, Environmental Protection Agency, Bureau of Land Management, and National Park Service, U.S. Department of the Interior; National Weather Service, U.S. Department of Commerce; Eugene Water & Electric Board; Pacific Power & Light Co.; Portland General Electric Co.; Idaho Power Co., Idaho; Cowlitz County & Clark County Public Utility Districts, Washington.

HYDROLOGIC CONDITIONS

The drought conditions that prevailed during the 1977 water year were substantially changed for the better with streamflow for the State being near normal during October and November.

In December, Western Oregon suffered severe storm damage from heavy rains and high winds of December 14. In the Portland area, Johnson Creek at Sycamore was the highest since the historic flood of December 1964. Several Oregon District streamflow gaging stations and cableways sustained considerable damage from the winds which were the highest since the Columbus Day 1962 storm.

The low snowpack and less than normal precipitation in the Cascade Range during January to March resulted in most of the Willamette Valley storage reservoirs being well below normal capacity for this period.

In late April, two days of heavy rain caused minor flooding and come crop damage in Eastern and Central Oregon. Most of the flooding occurred in the Upper Deschutes and Malheur River basins.

During May and June streamflow was above normal in the Wilson River basin and below normal in the Umpqua and Willamette River basins.

In early July some flash flooding occurred in the Deschutes River basin. Floods of August 22 near Pendleton caused some damage to roads and late crops. Streamflow was excessive in September due to the above normal rainfall.

Ground-water levels were generally near average throughout the year. Several wells had water levels below average during October and November, but had recovered to average levels by December. Most wells show a rising trend during the period November to January to a peak in the period of February and March and a general decline thereafter.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System of Units (SI) on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multicelled plants containing chlorophyll and lacking roots, stems, and leaves.

Bacteria are microscopic unicellular organisms, typically spherical, rod-like, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that may be used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C ± 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warmblooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warmblooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 1.0°C on M-enterrococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

Benthic organisms (invertebrates) are animals inhabiting the bottom of an aquatic environment. They include a number of different types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are frequently used as indicators of environmental quality because many have restricted mobility during their aquatic life phase, as well as a relatively long lifespan which allows for response to prevailing and changing water-quality conditions. Many benthic organisms inhabit specific types of environments which, if changed, result in changes in the composition of the benthic community.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, used for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the weight per unit area or volume of habitat.

Ash weight is the weight or amount of residue present after the residue from the dry weight determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash weight values of zooplankton and phytoplankton are expressed as g/m (grams per cubic meter), and periphyton and benthic organisms in g/m^2 (grams per square meter).

Dry weight refers to the weight of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the weight remains unchanged. This weight represents the total organic matter, ash and sediment, in the sample. Dry weight values are expressed in the same units as ash weight.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Cfs-day (ft^3/s-day) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons, or 2,445 cubic meters. It represents a runoff of approximately 0.0372 inch from 1 square mile or 0.3468 millimeter from 1 square kilometer.

Chemical oxygen demand (COD) indicates the quantity of oxidizable compounds in water and varies with water composition(s), temperature, period of contact, and other factors.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Continuing water-quality record station is a specified site which meets one or all conditions listed.

1. Where chemical samples are collected daily or monthly for 10 or more months during the water year.
2. Where water-temperature records include observations taken one or more times daily.
3. Where sediment discharge records include those periods for which sediment loads are computed and are considered to be representative of the runoff for the water year.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Cubic foot per second (ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, total fluids) that passes a given point within a given period of time.

Mean discharge is the arithmetic average of discharge during a specific period.

Instantaneous discharge is the discharge at a given time.

Dissolved refers to that material in a representative water sample which passes through a 0.45 um membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate. It is recognized that certain kinds of samples cannot be filtered; to provide for this, procedures that are considered equivalent to filtering through a 0.45 um membrane filter will be identified and announced at a later date. (Because some water samples contain colloidal material that can pass through a 0.45 um filter, analysis of samples for geochemical equilibrium studies may require filtering through a filter of smaller pore size. Data derived from such samples will require special identification when stored or retrieved. Instructions for such storage will be issued in the near future).

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeable with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per liter (UG/L, ug/l) is a unit expressing the concentration of chemical constituents in solution as weight (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/l) is a unit for expressing the concentrations of chemical constituents in solution. Milligrams per liter represents the weight of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/l, and is based on the mass of sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample volume, usually milliliters (ml) or liters (l).

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters (m), acres, or hectares. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually millimeters (ml) or liters (l). Number of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Partial-record station is a particular site where limited streamflow or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined either by sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay..........	0.00024 - 0.004	Sedimentation.
Silt..........	.004 - .062	Sedimentation.
Sand..........	.062 - 2.0	Sedimentation or sieve.
Gravel........	2.0 - 64.0	Sieve.

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent of total is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, or volume.

Periphyton is the assemblage of microorganisms attached to and growing upon solid surfaces. While consisting primarily of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton is a useful indicator of water quality.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are primary food producers in the aquatic environment and are commonly known as algae.

Blue-gree algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per ml of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per ml of sample.

Plankton is the floating (or weakly swimming) animal or plant life in a body of water consisting chiefly of minute plants (as diatoms and blue- green algae) and of minute animals (as protozoan, entomostracans, and various larvae).

Runoff in inches (IN.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff." Streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total".

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchial scheme beginning with kingdom and ending with species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata* is the following:

Kingdom..........................Animal
Phylum...........................Arthropoda
Class............................Insecta
Order............................Emphemeroptera
Family...........................Ephemeridae
Genus............................*Hexagenia*
Species................*Hexagenia limbata*

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the presence of a thermograph or a digital mechanism that records water temperature in digital format on punched paper tape.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the water year.

Tons per acre-foot indicates the dry weight of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour day.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total". (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample.)

Turbidity of a sample is the reduction of transparency due to the presence of particulate matter. In this report it is expressed in Jackson turbidity units (JTU).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the year after thorough mixing in the reservoir.

WRD is used as an abbreviation for "Water-Resources Data" in the summary "REVISIONS" paragraph to refer to previously published State annual hydrologic data reports.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

SPECIAL NETWORKS AND PROGRAMS

Some of the stations for which data are published in this report are included in special networks and programs. These stations are identified by their title, set in parentheses, under the station name.

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQAN) is an accounting network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated in the network design. Areal configuration of the network is based on river-basin accounting units designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of water-quality conditions nationwide on a year-to-year basis and (2) to detect and assess long-term changes in stream quality.

Pesticide program is a network of regularly sampled water-quality stations where additional monthly samples are collected to determine the concentration and distribution of pesticides in streams whose waters are used for irrigation or in streams in areas where potential contamination could result from the application of the commonly used insecticides and herbicides.

Pesticides are chemical compounds used to control the growth of undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Since the first application of DDT as an insecticide in the early 1930's, there have been almost 60,000 pesticide formulations registered, each containing at least one of the approximately 800 different basic pesticide compounds. The United State annually produces about 1 billion pounds. Chlorinated hydrocarbon pesticides are still commonly used in many areas of the country, although efforts are being made to replace many of them with more specific, fast-acting, and easily degradable compounds.

Radiochemical program is a network of regularly sampled water-quality stations where additional samples are collected monthly or twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Radioisotopes are isotope forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus. For example: Ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, with the natural mixture having atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron (Rose, 1966). There are 275 isotopes of the 81 stable elements in addition to more than 800 radioactive isotopes.

Radioisotopes that are determined in this program are natural uranium in ug/l (micrograms per liter), radium as radium-226 in PC/L (pCi/l, picocuries per liter), gross beta radiation as equivalent strontium/yttrium-90 or cesium-137 in PC/L, and gross alpha radiation as micrograms of uranium equivalent per liter (ug/l). Gross alpha and beta radioactivity associated with the fine-grained (silt- and clay-sized) sediments in the samples are also determined.

A picocurie (PC, pCi) is one trillionth (1 x 10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7 x 10^{10} radioactive disintegrations per second. A picocurie yields 2.2 dpm (disintegrations per minute).

DOWNSTREAM ORDER AND STATION NUMBER

Stations are listed in downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream.

Stations on tributaries entering above all main-stream stations are listed before the first main-stream station. Stations on tributaries to tributaries are listed in a similar manner. In the list of stations in the front of this report, the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of indentification, each water-quality station, gaging station, and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record and continuous-record stations; therefore, the station number for a partial-record station indicated downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 14105700 which appears just to the left of the station name, includes the 2-digit part number "14" plus the 6-digit downstream order number "105700." In this report, the records are listed in downstream order by parts. The part number refers to an area whose boundaries coincide with certain natural drainage lines. All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and Computation of Data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals; and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder which gives a continuous graph of the fluctuations (for digital recorders, a tape punched at 15-, 30-, or 60-minute intervals) or from direct readings on a nonrecording gage. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks on the measurement of stream discharge. Surface areas of lakes or reservoirs are determined from instrument surveys using standard methods.

For a stream-gaging station, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The application of the daily mean gage heights to the rating table gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other causes. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in determining discharge. Information required for determining the slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in determining discharge.

At some stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. Discharge over spillways is computed from a stage-discharge relation curve defined by discharge measurements. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, good record at adjoining stations, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated on the basis of operator's log, good record at adjoining stations, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of hydrologic data. For gaging stations on streams or canals, a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs, a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights are included for some streamflow stations and for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gage, general remarks, average discharge, and extremes of published records. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published, along with the current records, in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1933 stands for the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge are affected by the revision, that fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised: "(m)" that only the instantaneous minimum was revised; and "(P)" that only the peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given.

The type of gage currently in use; the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page 7.

Information pertaining to the accuracy of the discharge records, and to conditions that affect the natural flow at the gaging station, is given under "REMARKS"; for reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is also given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. Under "EXTREMES" are given: First, the extremes for the period of record; second, information available outside the period of record ; and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with EXTREMES FOR THE CURRENT YEAR: if they are all independent peaks (including the maximum for the year) above the selected base, with the time of occurrence and corresponding gage heights, are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

Skeleton rating tables are published, immediately following EXTREMES, for stream-gaging stations where they serve a useful purpose and the dates of applicability can be easily identified.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. In the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar and water years.

Footnotes to the table of daily discharges are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published for all reservoirs for which records are published on a daily basis, but it is not published for reservoirs for which only monthly data are given.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Accuracy of Data

The accuracy of discharge data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretation of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges is within 5 percent, "good" within 10 percent, and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge are shown to the nearest hundreth of a cubic foot per second for discharges of less than 1 ft^3/s, to tenths between 1.0 and 10 ft^3/s, to whole numbers between 10 and 1,000 ft^3/s, and to three significant figures greater than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumptive use, regulation, evaporation, or other factors. For such stations, discharge in cubic feet per second per square mile and runoff in inches are not published unless satisfactory adjustments can be made for such effects. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or unadjusted losses (consumptive use, evaporation, seepage, etc.) are large in comparison with the observed discharge.

Other Data Available

Monthly records for several ungaged sites are given in a separate section following the gaged sites. The accuracy of records for ungaged sites is generally lower than that for gaged sites, depending on the precision of the computation method and the accuracy of data used in the computations.

For most gaging stations, unpublished, detailed information, on file in the district office, includes discharge measurements, gage-height records, and rating tables. Many gaging-station records in Oregon through 1967 have been analyzed to determine several statistical summaries: (1) the number of days in each year that the daily discharge was between selected limits (duration tables), (2) the lowest mean discharge for selected numbers of consecutive days in each year, and (3) the highest mean discharge for selected numbers of consecutive days in each year.

Records of Discharge Collected by Agencies Other than the Geological Survey

Other Federal and State agencies have collected discharge data at other sites in Oregon during the current water year. Although these records have not been published by the U.S. Geological Survey, the National Water Data Exchange, NAWDEX, Water Resources Division, U.S. Geological Survey, National Center, Reston, VA., 22092, maintains an index of these sites and will furnish information about them.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Computation of Data

Records of surface water quality are listed in downstream order by station number. The data generally are collected at or near gaging stations, and are reported immediately following other records for those stations. Water-quality data for most ungaged sites are listed with the records for other surface-water stations, in regular downstream order. The exceptions are the less detailed data for several ungaged sites, which are grouped separately in the section titled "Analyses of samples collected at water-quality partial-record stations."

The descriptive headings for detailed records of surface-water quality give periods of record for the various categories of data, extremes for certain pertinent data, and general remarks. For less detailed records, only the overall period of record is listed.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses.

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey publications on Techniques of Water-Resources Investigations, which are listed on page 26.

One stream-water sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample for the accurate determination of mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. Where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the published records consist of daily maximum, minimum, and mean values. More detailed records may be obtained from the district office.

Since October 1967, the U.S. Geological Survey has used the metric system for reporting data on chemical constituents and concentrations of suspended sediment. Chemical constituents are now reported in milligrams per liter (mg/l) except for certain minor elements that are reported in micrograms per liter (ug/l). Suspended sediment is reported in milligrams per liter and water temperatures in degrees Celsius (°C). In water with a density of 1,000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per liter. To convert temperature in degrees Celsius to degrees Fahrenheit, see table 1 on page 21.

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor elements in micrograms per liter instead of milligrams per liter. (See "Definitions of terms", page 7.)

Table 1.--Degrees Celsius (°C) to degrees Fahrenheit (°F)*
(Temperature reported to nearest 0.5°C)

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0.0	32	10.0	50	20.0	68	30.0	86	40.0	104
.5	33	10.5	51	20.5	69	30.5	87	40.5	105
1.0	34	11.0	52	21.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	22.0	72	32.0	90	42.0	108
2.5	36	12.5	54	22.5	72	32.5	90	42.5	108
3.0	37	13.0	55	23.0	73	33.0	91	43.0	109
3.5	38	13.5	56	23.5	74	33.5	92	43.5	110
4.0	39	14.0	57	24.0	75	34.0	93	44.0	111
4.5	40	14.5	58	24.5	76	34.5	94	44.5	112
5.0	41	15.0	59	25.0	77	35.0	95	45.0	113
5.5	42	15.5	60	25.5	78	35.5	96	45.5	114
6.0	43	16.0	61	26.0	79	36.0	97	46.0	115
6.5	44	16.5	62	26.5	80	36.5	98	46.5	116
7.0	45	17.0	63	27.0	81	37.0	99	47.0	117
7.5	45	17.5	63	27.5	81	37.5	99	47.5	117
8.0	46	18.0	64	28.0	82	38.0	100	48.0	118
8.5	47	18.5	65	28.5	83	38.5	101	48.5	119
9.0	48	19.0	66	29.0	84	39.0	102	49.0	120
9.5	49	19.5	67	29.5	85	39.5	103	49.5	121

*°C = 5/9 (°F - 32) or °F = 9/5 (°C) + 32.

Solutes

The methods of collecting and analyzing water samples to determine the kinds and concentrations of solutes are described by Brown, Skougstad, and Fishman (1970). If the mixture of solutes throughout the stream cross section is homogeneous, one sample can adequately define the water quality at a given time. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge depending on the source of material and the turbulence and mixing of the stream. Some sites must be sampled at several vertical intervals across the channel to determine the solute load accurately.

At chemical-quality stations where monitors are installed, the records consist of daily maximum, minimum, and mean values for each constituent measured. More detailed records (hourly values) may be obtained from the district office of the U.S. Geological Survey at the address given on page IV of this report.

Water temperature

Water temperatures are measured at most of the water-quality stations. The water temperatures for daily stations are taken when a sample is collected, at about the same time each day. Large streams have small diurnal temperature changes; shallow streams may have a daily range of several degrees and may closely follow the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where continuously recording thermographs are used maximum and minimum temperatures for each day are published.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section or a single sample at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or concentration, samples may have been collected twice daily or, in some instances, hourly. The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment discharges observed for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions at the times of observations only, such data are useful in establishing seasonal relations between quality and streamflow for predicting long-term sediment-discharge characteristics of the stream.

In addition to records of the quantities of suspended sediment, records of periodic measurements of particle-size distribution of suspended sediment and bed material are included.

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of Data

The observation-well program in Oregon, begun in 1928, was continued through 1978 in cooperation with the Oregon Water Resources Department. During the period 1962-65, the number of wells in the observation-well network was increased from 102 to about 840. Observation wells in the program are part of a basic national network for providing a historical record of water-level changes in selected aquifers in the nation. Most of the wells are measured periodically by personnel of the Oregon Water Resources Department. Measurements are made in most of the wells three or four times a year to obtain records of the effects of pumping and seasonal changes in ground-water storage. The measurements are generally made in winter and spring before pumping begins, during the pumping season, and at the end of the pumping season. Water-level measurements in 95 representative wells in the Oregon observation-well network are included in this report; the locations of these wells are shown in figure 5.

Each well is identified by means of a 15-digit number that is based on the grid system of latitude and longitude. The first six digits represent degrees, minutes, and seconds of north latitude; the next seven digits are degrees, minutes, and seconds of west longitude; and the last two numbers are sequential numbers assigned in the order the wells are inventoried in a 1-second quadrangle. Each well is also identified by a local well number that provides continuity with older reports and local needs.

Well Descriptions

For each well, the well description includes, if available, the following information: Latitude-longitude number, local well number, owner, method of construction, use of well, aquifer name or lithology, diameter of casing, depth of well, depth interval perforated or screened, altitude of land surface datum (lsd) National Geodetic Vertical Datum of 1929 (NGVD), and a description of the measuring point.

The depth of the well at the time it was inventoried is given in the well description, and any subsequent changes also are described. Well diameter reported is the inside of the innermost well casing at land surface.

Water Levels

Measurements are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Water-level measurements in this report are given in feet below land-surface datum unless otherwise indicated. Those water levels that are above land-surface datum are preceded by a plus (+) sign. Land-surface datum is a datum plane that is approximately at land surface at each well. The height of the measuring point (MP) above or below land-surface datum is given in each well description.

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determing the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Most measurements are reported to a hundredth of a foot; others are reported only to a tenth of a foot or a larger unit. Water levels determined by air line are less accurate than those measured by other methods; therefore, these water levels are reported only to the nearest half a foot.

The highest and lowest water levels measured at each well for the period of record are reported. These are intended to represent static water levels, but the lowest levels reported for some wells may reflect recent pumping.

Hydrographs

Hydrographs show fluctuations of water levels during 1956-78 in 15 selected observation wells. Generally, water levels are highest during the wet winter and spring months and lowest during the dry summer and autumn months. Water levels are shown on the hydrographs in feet below the land surface at the well.

Well-Numbering System

Local designations of wells discussed in this report are based on the official system for the rectangular subdivision of public lands, referenced to the Willamette base line and meridian. The number indicates the location of the well by township, range, section, and its position within the section. A graphic illustration of this method of well numbering is shown below. The numbers indicate the township, the range, and the section, respectively, in which the well is located. The letters following the section number locate the well within the section. The first letter donotes the quarter section (160 acres); the second, the quarter-quarter section (40 acres); and the third, the quarter-quarter-quarter section (10 acres). Where two or more wells are in the same 10-acre subdivision, serial numbers are added after the third letter. The section number and three-letter position indicator are shown on the location map adjacent to the well symbol. Within a county, the wells are arranged in sequental order based on increasing numbers for township and range and are shown on the map (fig. 5) by section number. For example well 27S/18E-21aaa is in the NE¼NE¼NE¼ sec.21, T.27 S., R.18 E., in Lake County, and will be labeled as 21AAA.

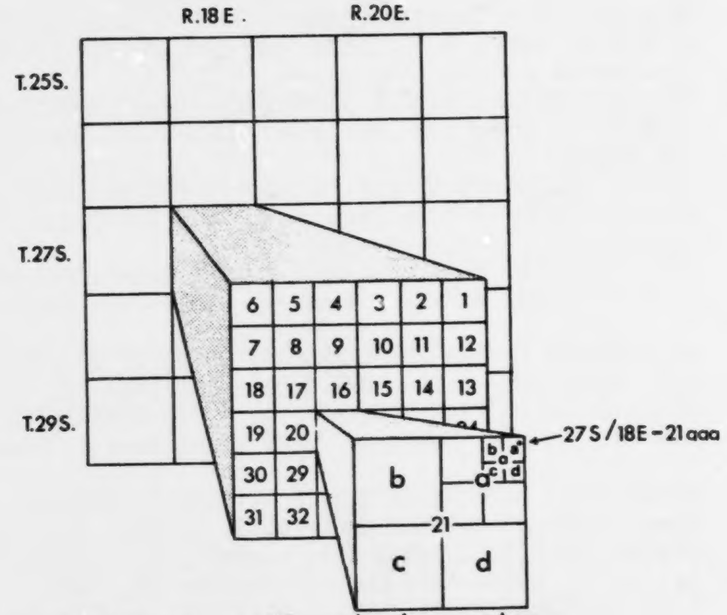


Figure 1.--Local identifier well-numbering system.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is futher divided into sections and chapters. For example, Section A of Book 3 (applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office.

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

1-D1. WATER TEMPERATURE-INFLUENTIAL FACTORS, FIELD MEASUREMENT, AND DATA PRESENTATION, by J.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS--TWRI, Book 1, Chapter D1. 1975. 65 pages.
1-D2. GUIDELINES FOR COLLECTION AND FIELD ANALYSIS OF GROUND-WATER SAMPLES FOR SELECTED UNSTABLE CONSTITUENTS, by W.W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
2-D1. APPLICATION OF SURFACE GEOPHYSICS TO GROUND-WATER INVESTIGATIONS, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
2-E1. APPLICATION OF BOREHOLE GEOPHYSICS TO WATER-RESOURCES INVESTIGATIONS, by W.S. Keys and L.M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
3-A1. GENERAL FIELD AND OFFICE PROCEDURES FOR INDIRECT DISCHARGE MEASUREMENTS, by M.A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
3-A2. MEASUREMENT OF PEAK DISCHARGE BY THE SLOPE-AREA METHOD, by Tate Dalrymple and M.A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
3-A3. MEASUREMENT OF PEAK DISCHARGE AT CULVERTS BY INDIRECT METHODS, by G.L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
3-A4. MEASUREMENT OF PEAK DISCHARGE AT WIDTH CONTRACTIONS BY INDIRECT METHODS, by H.F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
3-A5. MEASUREMENT OF PEAK DISCHARGE AT DAMS BY INDIRECT METHODS, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
3-A6. GENERAL PROCEDURE FOR GAGING STREAMS, by R.W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968. 13 pages.
3-A7. STAGE MEASUREMENTS AT GAGING STATIONS, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
3-A8. DISCHARGE MEASUREMENTS AT GAGING STATIONS, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

3-A11. MEASUREMENT OF DISCHARGE BY MOVING-BOAT METHOD, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-A12. FLUOROMETRIC PROCEDURES FOR DYE TRACING, by J.F. Wilson Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. Not currently available.

3-B1. AQUIFER-TEST DESIGN, OBSERVATION, AND DATA ANALYSIS, by R.W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. INTRODUCTION TO GROUND-WATER HYDRAULICS, A PROGRAMED TEXT FOR SELF-INSTRUCTION, by G.D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-C1. FLUVIAL SEDIMENT CONCEPTS, by H.P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. FIELD METHODS FOR MEASUREMENT OF FLUVIAL SEDIMENT, by H.P. Guy and V.W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

3-C3. COMPUTATION OF FLUVIAL-SEDIMENT DISCHARGE, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

4-A1. SOME STATISTICAL TOOLS IN HYDROLOGY, by H.C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

4-A2. FREQUENCY CURVES, by H.C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

4-B1. LOW-FLOW INVESTIGATIONS, by H.C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. STORAGE ANALYSES FOR WATER SUPPLY, by H.C. Riggs and C.H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. REGIONAL ANALYSES OF STREAMFLOW CHARACTERISTICS, by H.C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

4-D1. COMPUTATION OF RATE AND VOLUME OF STREAM DEPLETION BY WELLS, by C.T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.

5-A1. METHODS FOR COLLECTION AND ANALYSIS OF WATER SAMPLES FOR DISSOLVED MINERALS AND GASES, by Eugene Brown, M.W. Skougstad, and M.J. Fishman: USGS--TWRI Book 5, Chapter A1. 1970. 160 pages.

5-A2. DETERMINATION OF MINOR ELEMENTS IN WATER BY EMISSION SPECTROSCOPY, by P.R. Barnett and E.C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

5-A3. METHODS FOR ANALYSIS OF ORGANIC SUBSTANCES IN WATER, by D.F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.

5-A4.* METHODS FOR COLLECTION AND ANALYSIS OF AQUATIC BIOLOGICAL AND MICROBIOLOGICAL SAMPLES, edited by P.E. Greeson, T.A. Ehlke, G.A. Irwin, B.W. Lium, and K.V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.

5-A5.* METHODS FOR DETERMINATION OF RADIOACTIVE SUBSTANCES IN WATER AND FLUVIAL SEDIMENTS, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

5-C1. LABORATORY THEORY AND METHODS FOR SEDIMENT ANALYSIS, by H.P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

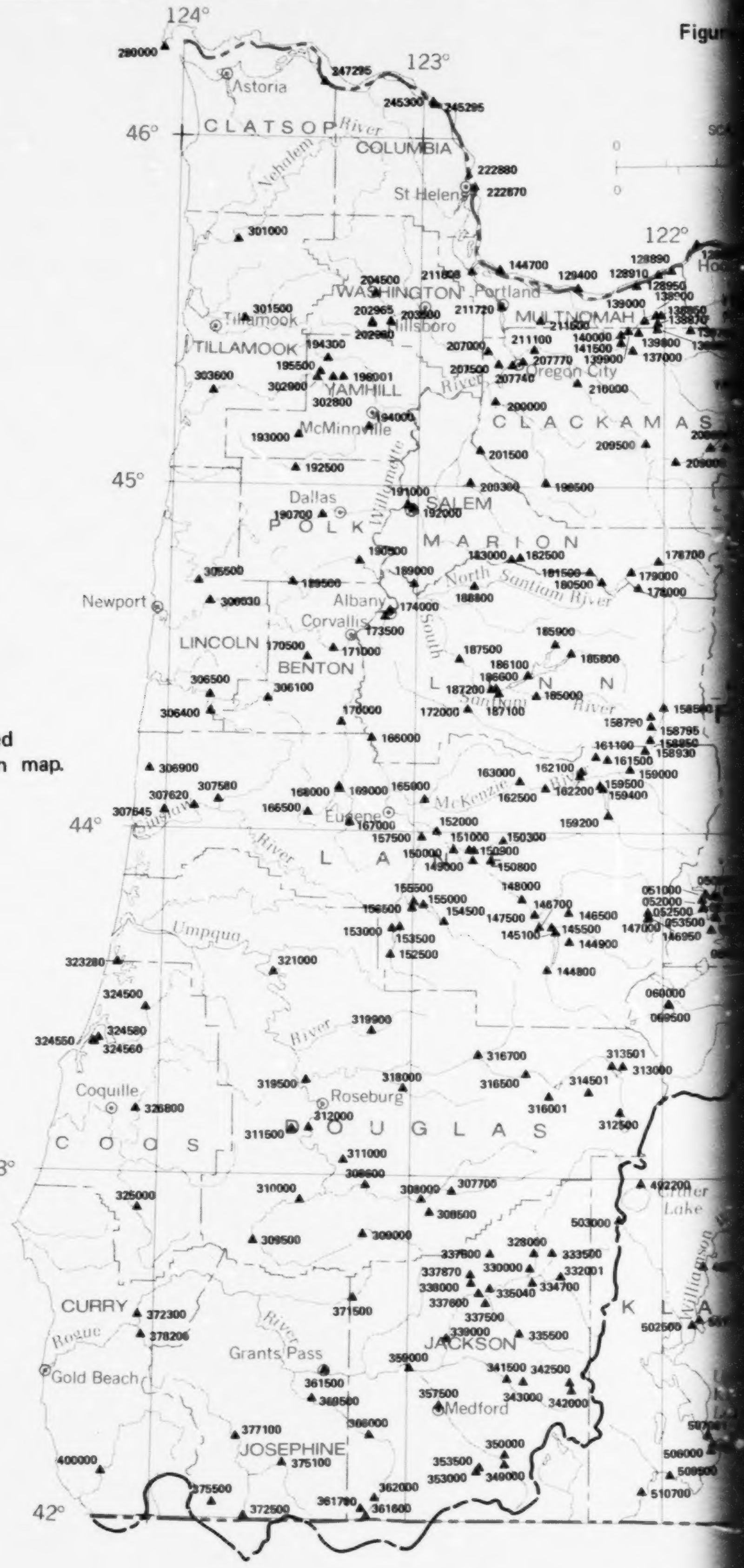
7-C1. FINITE DIFFERENCE MODEL FOR AQUIFER SIMULATION IN TWO DIMENSIONS WITH RESULTS OF NUMERICAL EXPERIMENTS, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. COMPUTER MODEL OF TWO-DIMENSIONAL SOLUTE TRANSPORT AND DISPERSION IN GROUND WATER, by L.F. Konikow and J.D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1976. 90 pages.

8-A1. METHODS OF MEASURING WATER LEVELS IN DEEP WELLS, by M.S. Garber and F.C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.

8-B2. CALIBRATION AND MAINTENANCE OF VERTICAL-AXIS TYPE CURRENT METERS, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

*These publications are available ONLY from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. They are in loose-leaf format and are subscription items. Additional supplements will be issued to subscribers at no extra cost. Checks should be made payable to Superintendent of Documents. Requester should emphasize to Superintendent of Documents that this a subscription item.



EXPLANATION

▲ 337600	Gaging station
— - —	Part boundary – Part numbers are omitted from station numbers on map.

A

Figure 2.—Map of Oregon showing locations of active gaging stations.

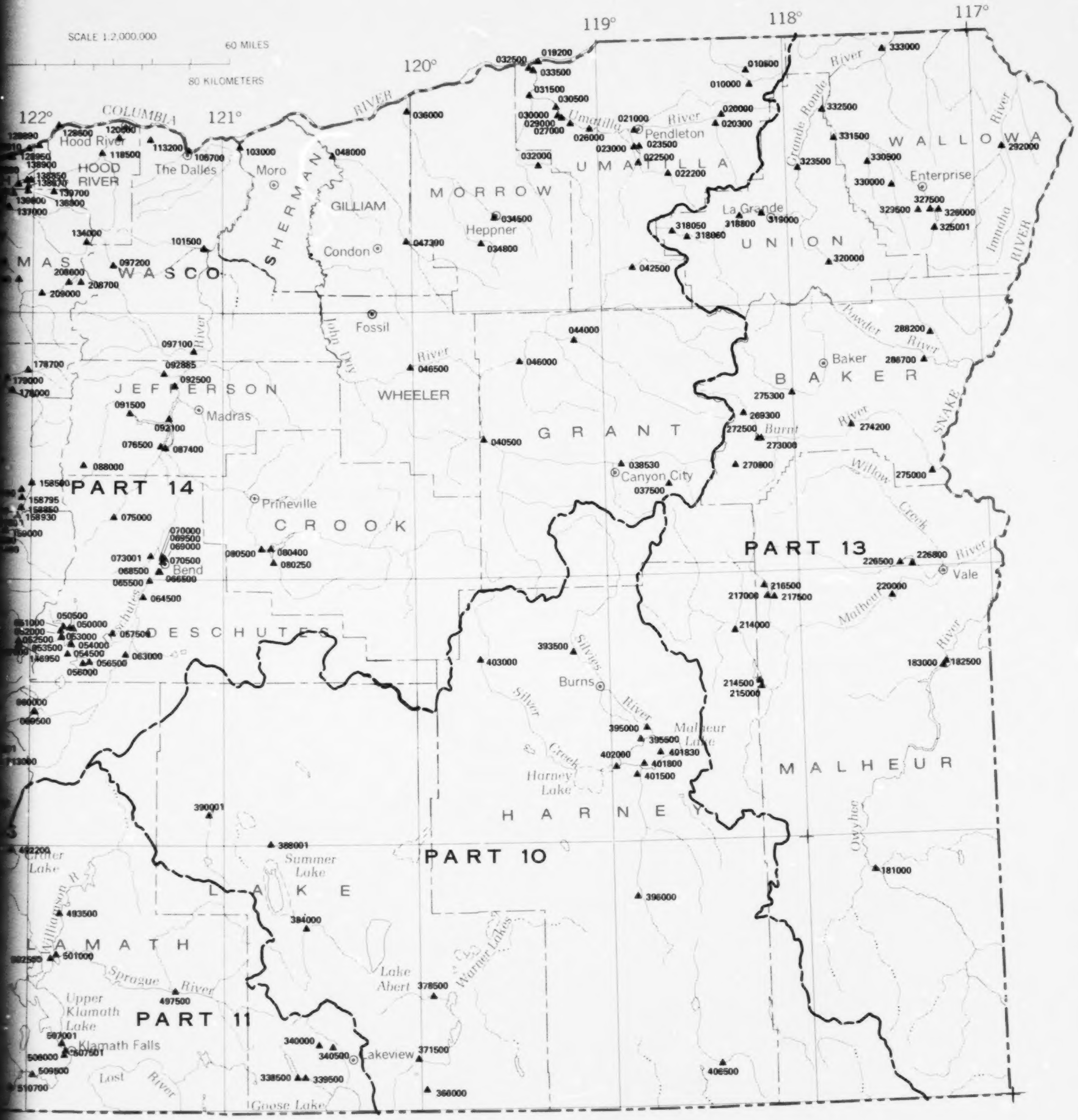
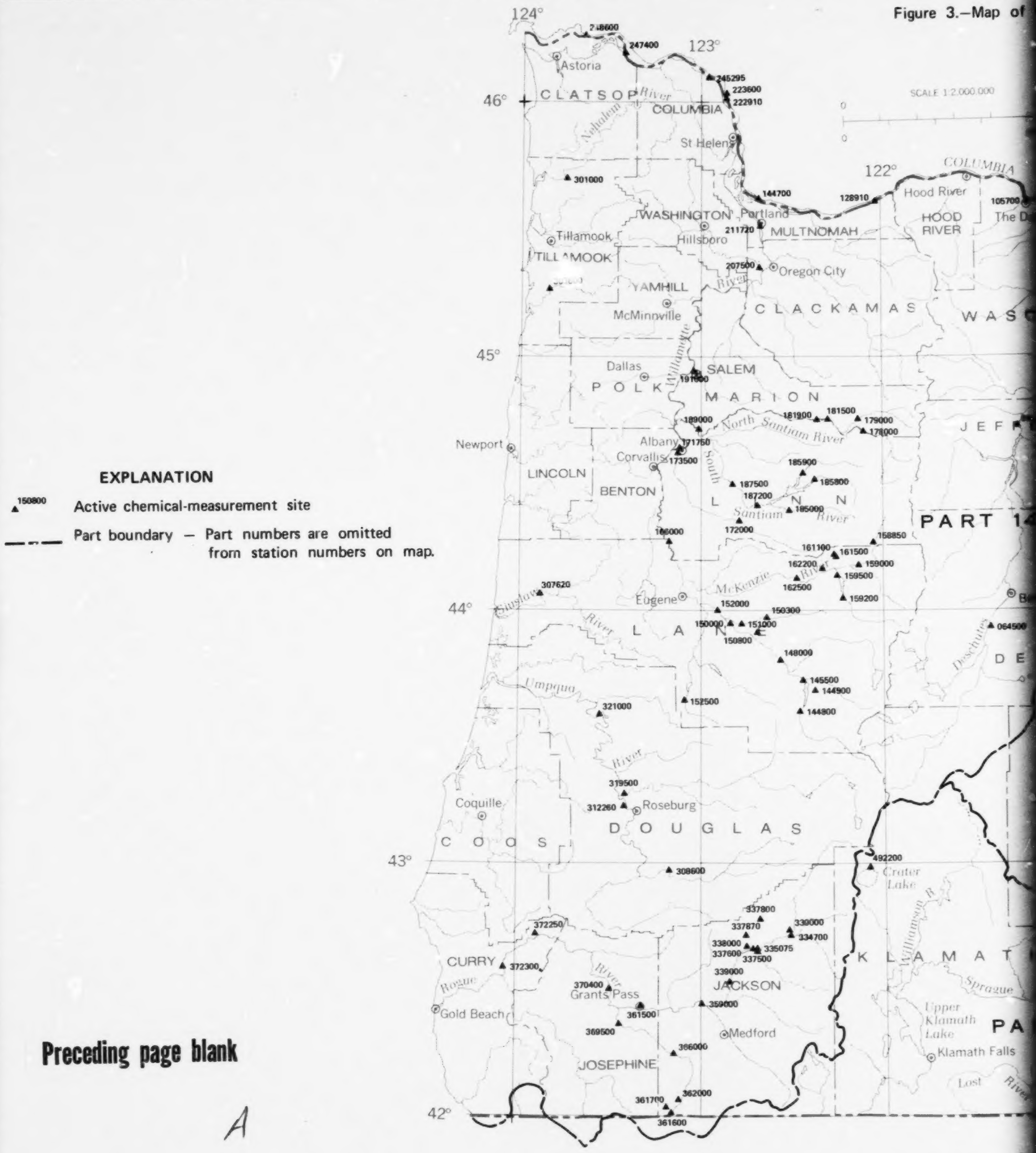


Figure 3.–Map of



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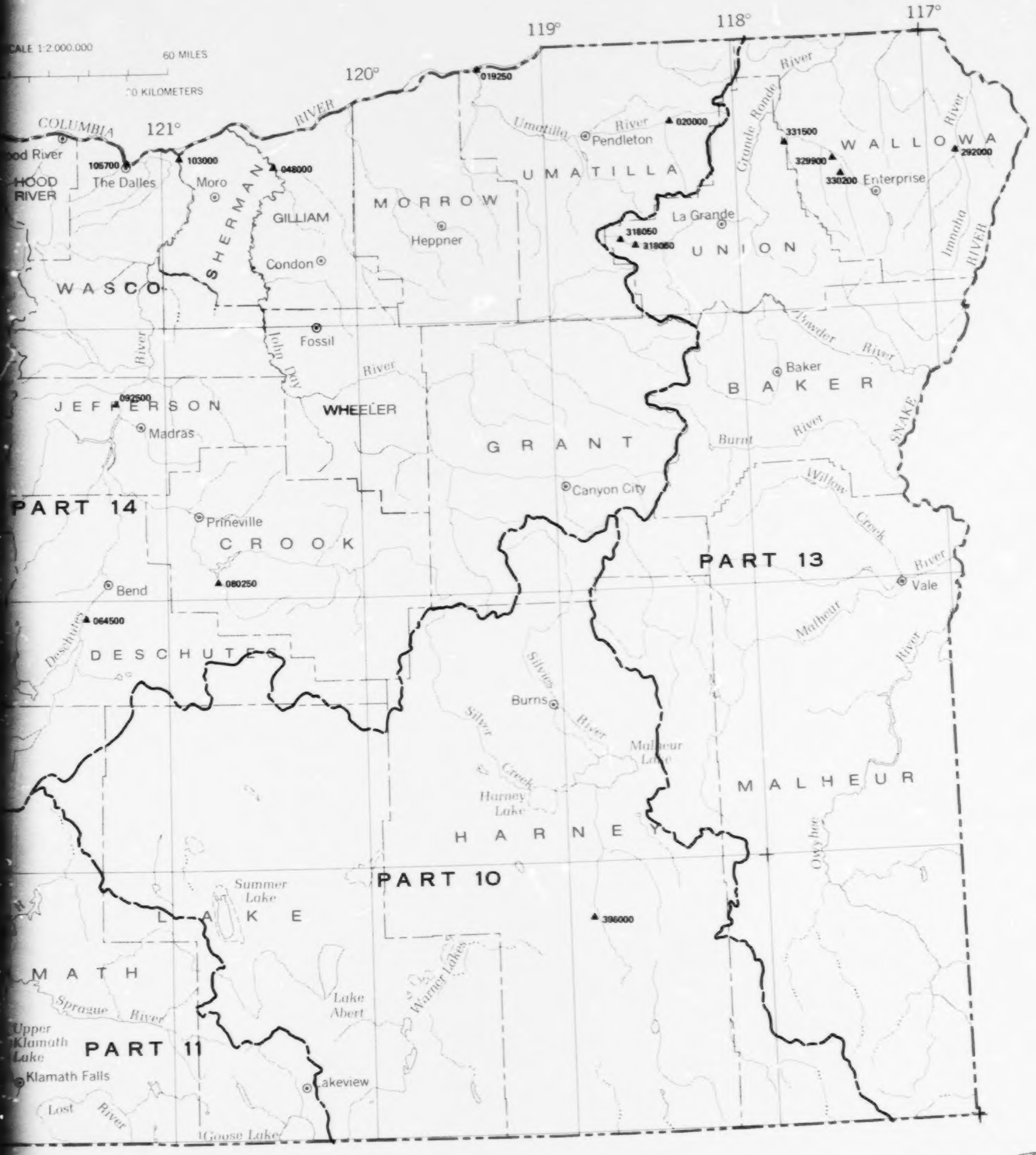
A

ure 3.—Map of Oregon showing sites where water-quality data were obtained.



B

THE GREAT BASIN

WARNER LAKES BASIN

10366000 TWENTYMILE CREEK NEAR ADEL, OR

LOCATION.--Lat 42°04'20", long 119°57'42", in SW¼NW¼ sec.25, T.40 S., R.23 E., Lake County, Hydrologic Unit 17120007, on left bank 1.5 mi (2.4 km) downstream from Twelvemile Creek and 8 mi (13 km) southwest of Adel.

DRAINAGE AREA.--194 mi^2 (502 km^2), including 46 mi^2 (119 km^2) in Cowhead Lake area.

PERIOD OF RECORD.--March 1910 to July 1916, December 1917 to September 1919, and March 1921 to June 1922 (published as "near Warner Lake"), September 1940 to November 1944, March 1945 to current year.

REVISED RECORDS.--WSP 1090: 1945. WSP 1514: 1951-53, 1954(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,560.83 ft (1,390.141 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 21, 1940, nonrecording gage or water-stage recorder at sites within 1 mi (2 km) downstream at various datums. Sept. 21, 1940, to Nov. 30, 1944, water-stage recorder at site 1.8 mi (2.9 km) upstream at different datums. Mar. 12, 1945, to June 28, 1952, water-stage recorder at site 70 ft (21 m) upstream at datum 0.88 ft (0.268 m) higher.

REMARKS.--Records good. Some regulation by pumpage from Cowhead Lake. Diversions in Oregon for irrigation above station; considerable diversions for irrigation in Cowhead Lake area in California.

AVERAGE DISCHARGE.--43 years (water years 1911-15, 1919, 1941-44, 1946-78), 51.7 ft^3/s (1.464 m^3/s), 37,460 acre-ft/yr (46.2 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,670 ft^3/s (104 m^3/s) Dec. 23, 1964, gage height, 16.1 ft (4.91 m), from rating curve extended above 920 ft^3/s (26.1 m^3/s) on basis of contracted-opening measurement of 3,260 ft^3/s (92.3 m^3/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 510 ft^3/s (14.4 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 15	0430	*1,200	34.0	*6.86	2.091	Mar. 19	2200	791	22.4	5.67	1.728
Feb. 23	2200	653	18.5	5.21	1.588	Apr. 1	2130	1,150	32.0	6.71	2.045
Mar. 5	2200	980	27.8	6.23	1.899	Apr. 26	2200	806	22.8	5.72	1.743

Minimum discharge, 1.8 ft^3/s (0.051 m^3/s) Aug. 12, Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	3.1	7.5	16	11	66	563	129	80	30	4.1	4.8
2	2.3	3.0	6.3	20	12	81	530	95	74	28	3.5	4.1
3	2.5	3.2	6.0	19	23	27[illegible]	315	91	77	29	3.5	3.5
4	2.3	3.7	14	17	65	375	192	88	79	30	3.5	3.0
5	2.0	4.4	11	17	110	539	131	73	81	27	3.5	3.5
6	1.9	4.8	7.9	17	234	430	156	69	89	26	4.1	5.6
7	2.0	4.5	7.8	14	200	380	242	66	94	25	4.1	6.4
8	2.1	4.1	5.0	15	117	512	149	74	92	23	3.5	5.6
9	2.2	3.8	5.3	19	66	410	121	86	94	19	3.5	4.8
10	2.2	4.5	8.3	25	43	360	110	99	90	18	3.5	5.6
11	2.5	3.7	8.6	26	37	288	96	117	76	18	3.5	6.4
12	2.4	4.1	11	33	31	146	79	98	67	18	3.0	5.6
13	2.6	4.1	6.7	50	28	101	75	135	62	16	4.1	5.6
14	2.5	4.2	332	114	23	98	85	170	60	15	4.8	6.4
15	1.9	4.3	530	286	19	95	81	158	56	13	4.1	6.4
16	1.9	4.4	51	180	16	151	84	115	51	9.3	4.8	4.8
17	2.0	4.1	32	176	16	340	82	102	46	7.8	4.8	4.8
18	1.9	3.4	20	102	16	417	92	102	47	7.2	4.8	4.8
19	2.3	2.5	14	65	23	456	68	104	47	6.2	4.1	5.6
20	2.2	5.2	14	48	73	472	69	107	45	5.4	4.1	4.8
21	2.5	4.2	17	37	144	365	78	119	43	5.3	3.5	4.8
22	2.3	6.0	19	31	202	503	66	117	41	4.6	4.1	4.8
23	2.5	5.5	21	22	292	342	58	99	39	4.3	4.8	3.5
24	2.4	11	19	16	330	224	55	91	39	3.9	4.1	3.5
25	2.3	20	15	16	338	204	147	88	37	4.0	3.5	3.5
26	2.7	29	17	20	284	190	330	81	35	4.0	4.8	3.5
27	3.5	20	17	17	119	176	276	78	33	4.0	4.8	3.5
28	3.4	12	17	20	77	170	99	85	36	3.8	4.8	3.5
29	2.8	8.9	17	13	---	140	88	88	41	3.8	4.1	3.5
30	3.3	8.7	16	22	---	156	92	84	32	4.0	4.1	3.5
31	3.5	---	14	12	---	146	---	79	---	4.1	4.8	---
TOTAL	75.7	204.4	1287.4	1485	2949	8603	4609	3087	1783	416.7	126.3	139.7
MEAN	2.44	6.81	41.5	47.9	105	278	154	99.6	59.4	13.4	4.07	4.66
MAX	3.5	29	530	286	338	539	563	170	94	30	4.8	6.4
MIN	1.9	2.5	5.0	12	11	66	55	66	32	3.8	3.0	3.0
AC-FT	150	405	2550	2950	5850	17060	9140	6120	3540	827	251	277

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CAL YR 1977  TOTAL   2733.33   MEAN  7.49   MAX 530   MIN  .45   AC-FT   5420
WTR YR 1978  TOTAL  24766.20   MEAN 67.9    MAX 563   MIN 1.9    AC-FT  49120
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10371500 DEEP CREEK ABOVE ADEL, OR

LOCATION.--Lat 42°11'21", long 120°00'02", in SW¼NW¼ sec.15, T.39 S., R.23 E., Lake County, Hydrologic Unit 17120007, on left bank 700 ft (213 m) downstream from Drake Creek and 5 mi (8 km) west of Adel.

DRAINAGE AREA.--249 mi² (645 km²).

PERIOD OF RECORD.--September 1922 to September 1923, October 1929 to current year. Monthly discharge only October 1929 to September 1932, published in WSP 1314.

GAGE.--Water-stage recorder. Datum of gage is 4,980.34 ft (1,518.008 m) National Geodetic Vertical Datum of 1929 (State Highway Department bench mark). Sept. 8 to Dec. 20, 1922, nonrecording gage. Dec. 21, 1922, to Sept. 30, 1923, and Oct. 11, 1929, to Dec. 23, 1964, water-stage recorder at site 700 ft (213 m) downstream at different datums. Jan. 20 to Sept. 30, 1965, nonrecording gage at site 2,000 ft (610 m) downstream at different datum.

REMARKS.--Records good. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--50 years, 129 ft³/s (3.653 m³/s), 93,460 acre-ft/yr (115 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,420 ft³/s (267 m³/s) Dec. 23, 1964, gage height, 10.64 ft (3.243 m), from floodmark, from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of slope-area measurements at 7.3 ft (2.2 m) and of peak flow; minimum, 1.7 ft³/s (0.048 m³/s) July 20, 27-29, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 15	0800	1,240	35.1	3.76	1.146
Apr. 1	2000	*1,250	35.4	*3.77	1.149
Apr. 26	2400	714	20.2	3.12	0.951
May 15	2300	694	19.7	3.09	0.942

Minimum daily discharge, 13 ft³/s (0.37 m³/s) Nov. 18-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	20	64	65	62	119	1040	490	270	122	17	20
2	19	20	60	70	56	145	756	470	250	105	16	19
3	17	22	76	86	69	245	622	495	240	107	15	17
4	17	20	99	77	83	290	490	480	240	143	15	24
5	16	20	76	63	105	380	398	416	240	113	15	24
6	15	21	68	56	145	310	398	384	220	97	15	27
7	16	19	69	56	135	335	393	384	200	86	15	30
8	16	17	52	60	103	407	306	430	200	77	15	37
9	15	20	71	71	103	375	326	475	200	66	15	33
10	15	20	55	84	86	318	411	544	220	57	16	34
11	16	19	56	68	83	287	435	538	230	53	15	38
12	15	19	53	86	76	190	389	460	230	50	15	33
13	15	21	65	95	79	163	375	556	210	48	15	31
14	15	21	647	124	71	145	407	634	190	43	16	34
15	15	20	844	170	60	138	353	670	170	38	17	34
16	15	20	248	160	66	155	348	592	155	33	17	30
17	14	17	180	150	79	248	322	470	145	30	17	30
18	14	13	148	129	60	298	302	435	130	26	17	31
19	14	13	101	124	66	326	290	435	140	24	17	32
20	16	13	107	107	76	389	344	445	160	24	15	31
21	14	16	131	93	99	402	322	470	150	23	17	30
22	15	20	122	83	140	460	298	450	145	23	17	30
23	15	30	105	75	190	520	273	393	140	22	17	29
24	17	40	93	65	252	416	273	393	135	21	16	28
25	17	70	109	70	287	375	380	393	155	20	15	27
26	22	125	107	76	273	398	532	330	155	20	15	27
27	22	105	83	74	183	411	574	302	155	20	15	26
28	20	90	86	74	145	470	510	322	155	19	15	26
29	19	80	86	65	---	485	480	318	150	18	16	26
30	20	70	73	66	---	592	520	306	145	17	17	26
31	22	---	56	62	---	616	---	287	---	17	19	---
TOTAL	520	1021	4190	2724	3232	10408	12867	13767	5525	1562	494	864
MEAN	16.8	34.0	135	87.9	115	336	429	444	184	50.4	15.9	28.8
MAX	22	125	844	170	287	616	1040	670	270	143	19	38
MIN	14	13	52	56	56	119	273	287	130	17	15	17
AC-FT	1030	2030	8310	5400	6410	20640	25520	27310	10960	3100	980	1710

CAL YR 1977 TOTAL 13612.2 MEAN 37.3 MAX 844 MIN 3.7 AC-FT 27000
WTR YR 1978 TOTAL 57174.0 MEAN 157 MAX 1040 MIN 13 AC-FT 113400

NOTE.--No gage-height record June 1-30.

10378500 HONEY CREEK NEAR PLUSH, OR

LOCATION.--Lat 42°25'30", long 119°55'20", in SW¼SW¼ sec.20, T.36 S., R.24 E., Lake County, Hydrologic Unit 17120007, on right bank 700 ft (213 m) upstream from mouth of canyon, 1 mi (1.6 km) northwest of Plush, and 4 mi (6.4 km) downstream from Twelvemile Creek.

DRAINAGE AREA.--170 mi² (440 km²), approximately.

PERIOD OF RECORD.--May 1909 to September 1914 (prior to January 1910, gage heights only), March to May 1915, March to September 1921, March to June 1922, May 1930 to current year. Monthly discharge only May 1930 to September 1949, published in WSP 1314.

REVISED RECORDS.--WSP 1564: 1911-12. WSP 1714: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,552.60 ft (1,387.632 m) National Geodetic Vertical Datum of 1929. Dec. 24, 1964, to Sept. 30, 1965, nonrecording gage at site 100 ft (30 m) downstream at different datums. See WSP 1927 for history of changes prior to Dec. 24, 1964.

REMARKS.--Records good. Slight regulation by five small reservoirs, combined capacity, 870 acre-ft (1.07 hm³). Diversions for irrigation above station.

AVERAGE DISCHARGE.--52 years (water years 1911-14, 1931-78), 29.6 ft³/s (0.838 m³/s), 21,450 acre-ft/yr (26.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s (312 m³/s) Dec. 23, 1964, gage height, 13.4 ft (4.08 m), from floodmark, from rating curve extended above 250 ft³/s (7.08 m³/s) on basis of slope-area measurements at gage height 10.46 ft (3.188 m) and of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Apr. 1	0630	361	10.2	4.37	1.332	Apr. 26	2230	*622	17.6	*5.19	1.582
Apr. 11	0300	224	6.34	3.80	1.158						

Minimum discharge, 0.51 ft³/s (0.014 m³/s) Oct. 5, 6, Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	2.9	6.4	7.6	8.3	18	272	212	52	21	.88	3.2
2	.79	2.9	5.5	8.3	7.4	19	180	158	51	16	.84	2.8
3	.62	2.9	5.0	9.4	14	27	136	132	48	26	.79	1.4
4	.54	2.9	5.2	9.8	29	35	112	112	45	48	.74	.79
5	.51	2.9	5.5	9.4	29	44	81	92	47	30	.70	.65
6	.51	3.1	5.0	8.3	43	34	92	84	44	21	.74	.93
7	.54	2.9	4.6	7.1	33	28	98	84	39	16	.74	1.4
8	.88	2.6	3.8	8.0	19	32	74	90	39	16	.74	1.7
9	1.1	2.6	3.2	15	16	37	75	98	39	13	.65	1.7
10	1.2	2.6	4.8	21	13	34	98	137	45	11	.62	1.7
11	1.1	2.3	4.8	16	11	33	154	119	52	9.4	.59	2.8
12	1.3	2.3	5.2	15	13	29	105	93	43	8.0	.57	2.9
13	1.4	2.6	4.8	15	14	25	90	103	38	6.8	.65	2.8
14	1.4	2.6	11	29	10	21	89	115	32	6.4	.74	3.2
15	1.4	2.4	75	63	10	21	77	137	30	4.4	1.0	3.2
16	1.3	2.0	32	33	7.4	21	75	132	28	3.2	1.4	3.1
17	1.6	1.7	24	27	12	20	66	105	24	3.4	1.4	2.8
18	1.7	1.3	18	17	11	27	62	90	22	3.2	1.4	2.7
19	1.9	1.4	13	16	12	35	57	89	28	2.8	1.3	2.7
20	2.3	1.4	12	15	18	46	68	90	27	2.3	1.2	2.6
21	2.4	1.6	13	12	27	58	69	89	24	2.4	1.1	2.3
22	2.3	1.9	18	8.3	33	105	63	83	23	2.3	1.4	2.2
23	2.6	2.2	13	7.6	38	142	63	89	23	1.7	1.4	2.0
24	2.7	3.4	12	7.4	45	112	66	95	22	1.7	1.4	1.9
25	2.8	6.4	9.8	8.0	36	83	89	83	29	1.7	1.4	1.8
26	2.7	12	8.3	8.6	31	84	313	72	31	1.7	1.9	1.7
27	2.8	10	8.3	9.4	24	87	400	66	29	2.3	3.4	1.7
28	2.6	8.7	8.3	10	22	98	285	68	30	2.0	2.7	1.6
29	2.6	7.4	8.7	11	---	103	244	63	31	1.7	2.4	1.5
30	2.8	6.8	8.0	9.4	---	110	220	58	29	1.4	2.6	1.4
31	2.9	---	7.3	9.8	---	141	---	54	---	1.1	3.0	---
TOTAL	52.49	108.7	363.5	451.4	586.1	1709	3873	3092	1044	287.9	40.39	63.17
MEAN	1.69	3.62	11.7	14.6	20.9	55.1	129	99.7	34.8	9.29	1.30	2.11
MAX	2.9	12	75	63	45	142	400	212	52	48	3.4	3.2
MIN	.51	1.3	3.2	7.1	7.4	18	57	54	22	1.1	.57	.65
AC-FT	104	216	721	895	1160	3390	7680	6130	2070	571	80	125

CAL YR 1977 TOTAL 1705.50 MEAN 4.67 MAX 75 MIN .25 AC-FT 3380
WTR YR 1978 TOTAL 11671.65 MEAN 32.0 MAX 400 MIN .51 AC-FT 23150

10384000 CHEWAUCAN RIVER NEAR PAISLEY, OR

LOCATION.--Lat 42°41'05", long 120°34'08", in SW¼NW¼ sec.26, T.33 S., R.18 E., Lake County, Hydrologic Unit 17120006, on left bank 1.2 mi (1.9 km) downstream from Mill Creek and 1.4 mi (2.3 km) southwest of Paisley.

DRAINAGE AREA.--275 mi^2 (712 km^2).

PERIOD OF RECORD.--April 1912 to September 1921, May 1924 to current year. Published as "above Conn ditch, near Paisley" April to September 1912 and May 1924 to September 1955, as "above Mill Creek, near Paisley" October 1912 to December 1913, and as "at Chewaucan Land & Cattle Co.'s gage, near Paisley" January to September 1914.

REVISED RECORDS.--WSP 860: Drainage area. WSP 1927: 1957-59.

GAGE.--Water-stage recorder. Datum of gage is 4,430 ft (1,350 m) National Geodetic Vertical Datum of 1929 (river-profile survey). See WSP 1734 for history of changes prior to Oct. 6, 1956.

REMARKS.--Records good. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--63 years, 143 ft^3/s (4.050 m^3/s), 103,600 acre-ft/yr (128 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,490 ft^3/s (184 m^3/s) Dec. 22, 1964, gage height, 8.35 ft (2.545 m), from rating curve extended above 900 ft^3/s (25.5 m^3/s) on basis of slope-area measurement of peak flow; no flow for part of each day Dec. 7, 1927, Dec. 12, 1932, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s (14.2 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 15	1200	675	19.1	3.10	0.945	May 15	2000	*754	21.4	*3.12	0.951
Apr. 1	1030	593	16.8	2.95	0.899						

Minimum discharge, 8.5 ft^3/s (0.24 m^3/s) Nov. 19, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	34	80	84	86	130	553	409	343	120	35	33
2	34	33	73	101	127	147	476	391	339	113	35	31
3	32	37	80	103	130	162	465	438	335	123	35	30
4	30	36	105	96	184	192	418	438	335	127	35	28
5	30	38	80	99	167	214	369	403	339	112	35	28
6	29	38	77	94	149	201	372	383	351	100	35	30
7	29	37	88	87	136	182	366	371	359	95	35	32
8	30	33	61	92	107	237	348	403	359	94	35	33
9	29	33	58	143	96	290	336	442	351	88	35	35
10	28	36	74	189	80	243	342	515	347	81	34	45
11	28	33	71	162	75	229	372	530	347	76	33	60
12	28	33	66	162	80	197	358	487	300	75	33	49
13	27	34	75	176	75	186	355	505	268	73	33	43
14	28	35	353	279	61	157	359	566	245	68	33	46
15	27	34	520	339	62	157	342	663	236	64	33	47
16	27	36	235	248	68	164	351	675	218	61	36	41
17	27	31	184	235	107	174	324	588	200	61	38	38
18	27	30	148	169	96	191	296	545	186	59	36	37
19	26	21	108	174	103	205	282	525	208	56	35	38
20	26	33	90	157	114	237	296	525	184	53	33	38
21	26	50	126	140	123	265	290	535	172	45	32	37
22	27	70	150	133	133	304	265	555	163	34	32	36
23	28	73	132	89	140	342	245	525	155	32	34	36
24	29	85	118	80	158	336	245	505	162	32	34	35
25	31	95	92	90	158	300	279	475	167	34	31	34
26	36	223	89	95	157	316	321	422	147	33	32	33
27	37	163	106	97	146	325	328	387	136	31	33	32
28	34	104	99	101	128	358	355	375	141	29	33	31
29	32	92	96	102	---	395	351	366	157	28	32	31
30	34	89	106	91	---	444	391	355	146	32	31	31
31	36	---	80	97	---	483	---	348	---	38	33	---
TOTAL	931	1719	3820	4304	3246	7763	10450	14650	7396	2067	1049	1098
MEAN	30.0	57.3	123	139	116	250	348	473	247	66.7	33.8	36.6
MAX	39	223	520	339	184	483	553	675	359	127	38	60
MIN	26	21	58	80	61	130	245	348	136	28	31	28
AC-FT	1850	3410	7580	8540	6440	15400	20730	29060	14670	4100	2080	2180

CAL YR 1977 TOTAL 16940.6 MEAN 46.4 MAX 520 MIN 9.6 AC-FT 33600
WTR YR 1978 TOTAL 58493.0 MEAN 160 MAX 675 MIN 21 AC-FT 116000

10388001 ANA RIVER NEAR SUMMER LAKE, OR

LOCATION.--Lat 43°00'00", long 120°45'00", in SE¼ sec.6, T.30 S., R.17 E., Lake County, Hydrologic Unit 17120005, on left bank 300 ft (91 m) downstream from diversion dam and 2.0 mi (3.2 km) northeast of town of Summer Lake.

DRAINAGE AREA.--Indeterminate, source of stream is Ana River Springs, three-quarters of a mile above station, which are flooded over by pondage behind diversion dam.

PERIOD OF RECORD.--October 1929 to September 1939 (river only); June to September 1928, April 1931 to July 1938, and April 1940 to September 1942 (irrigation season records for Summer Lake Canal only); June 1951 to current year. Prior to June 1951 monthly discharge only, published in WSP 1314.

GAGE.--Water-stage recorder. Altitude of gage is 4,160 ft (1,268 m) from plans of Ana River diversion dam. Oct. 1, 1929, to Sept. 30, 1939, at site 80 ft (24 m) downstream at different datum.

REMARKS.--Records good. All records presented herein include flow in Summer Lake Canal which diverts 300 ft (91 m) above station for irrigation of lands along west side of Summer Lake. Flow regulated by gates at diversion dam.

AVERAGE DISCHARGE.--30 years (water years 1931-32, 1936, 1952-78), 91.8 ft^3/s (2.600 m^3/s), 66,510 acre-ft/yr (82.0 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 188 ft^3/s (5.32 m^3/s) Dec. 22, 1964, gage height, 2.81 ft (0.856 m), no flow in canal; minimum, 1.0 ft^3/s (0.028 m^3/s) Jan. 21, 22, 1970; minimum daily, 3.0 ft^3/s (0.085 m^3/s) Oct. 31, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 168 ft^3/s (4.76 m^3/s) Mar. 11, no flow in canal; minimum daily, 53 ft^3/s (1.50 m^3/s) May 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	96	96	95	95	71	94	77	83	91	82	91
2	81	95	96	95	95	74	94	77	83	89	83	92
3	81	95	96	95	96	76	93	77	83	90	84	92
4	81	94	96	95	96	78	93	77	83	88	85	91
5	81	94	96	96	96	81	94	75	84	84	88	88
6	81	94	96	95	96	83	94	70	84	84	88	88
7	81	94	95	94	96	84	94	66	84	83	87	86
8	81	95	95	94	96	85	94	53	84	82	89	92
9	81	94	95	94	96	84	94	63	84	83	90	90
10	81	94	95	94	95	84	94	78	85	86	90	88
11	81	92	96	94	95	132	94	89	85	87	90	88
12	81	73	96	94	95	150	94	86	85	85	91	88
13	81	75	96	94	95	94	94	84	85	85	91	86
14	81	76	97	94	95	81	94	83	86	84	91	82
15	82	78	97	95	95	105	94	82	86	84	92	83
16	92	79	97	95	95	103	94	82	86	84	93	86
17	114	80	97	96	95	100	94	80	85	84	93	85
18	111	98	96	96	95	99	85	81	85	84	93	85
19	109	112	96	96	95	97	57	81	85	83	94	110
20	105	108	95	96	95	97	59	82	85	83	91	115
21	104	105	95	96	95	97	63	82	85	83	88	111
22	102	103	95	96	95	96	66	82	85	83	89	109
23	102	101	95	96	95	96	67	82	85	83	89	98
24	101	100	95	96	95	96	68	82	86	83	90	98
25	100	99	95	96	95	96	69	82	86	83	91	97
26	98	98	95	96	95	95	70	82	86	83	90	96
27	97	97	95	96	95	95	70	83	85	84	90	95
28	97	97	95	95	79	95	71	83	85	84	90	94
29	97	97	95	95	---	95	72	83	90	84	90	94
30	97	96	95	95	---	95	73	83	87	84	91	93
31	96	---	95	95	---	94	---	83	---	83	91	---
TOTAL	2838	2809	2964	2949	2651	2908	2486	2450	2550	2620	2774	2791
MEAN	91.5	93.6	95.6	95.1	94.7	93.8	82.9	79.0	85.0	84.5	89.5	93.0
MAX	114	112	97	96	96	150	94	89	90	91	94	115
MIN	81	73	95	94	79	71	57	53	83	82	82	82
AC-FT	5630	5570	5880	5850	5260	5770	4930	4860	5060	5200	5500	5540

CAL YR 1977 TOTAL 31808 MEAN 87.1 MAX 114 MIN 66 AC-FT 63090
WTR YR 1978 TOTAL 32790 MEAN 89.8 MAX 150 MIN 53 AC-FT 65040

10390001 SILVER CREEK NEAR SILVER LAKE, OR

LOCATION.--Lat 43°06'50", long 121°03'59" in NE¼SW¼ sec.28, T.28 S., R.14 E., Lake County, Hydrologic Unit 17120005, on right bank 1.5 mi (2.4 km) downstream from diversion dam of Silver Lake Irrigation District, 1.5 mi (2.4 km) southwest of town of Silver Lake, and 3 mi (5 km) upstream from Bridge Creek.

DRAINAGE AREA.--180 mi^2 (466 km^2), approximately.

PERIOD OF RECORD.--January 1905 to March 1907, January 1909 to September 1927, February to December 1928, February 1929 to current year.

REVISED RECORDS.--WSP 1564: 1906, 1910, 1921(M). WSP 1734: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Sept. 15, 1932. Datum of gage is 4,361.22 ft (1,329.300 m) National Geodetic Vertical Datum of 1929. Prior to May 24, 1932, nonrecording gage or water-stage recorder at practically same location at datum 1.00 ft (0.305 m) higher, or nonrecording gage at diversion dam outlet 1.5 mi (2.4 km) upstream at different datum.

REMARKS.--Records good. Flow regulated by reservoir, capacity, 800 acre-ft (986,000 m^3), above diversion dam 1.5 mi (2.4 km) above station and by Thompson Valley Reservoir, capacity, 17,400 acre-ft (21.5 hm^3), 11 mi (18 km) above station. Records given herein include flow in Silver Lake Irrigation District Canal which has diverted 1.5 mi (2.4 km) above station 1923-43, 1966-78.

AVERAGE DISCHARGE.--66 years (water years 1906, 1910-27, 1930-41, 1944-78), 30.1 ft^3/s (0.852 m^3/s), 21,810 acre-ft/yr (26.9 hm^3/yr), including diversion by Silver Lake Irrigation District Canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft^3/s (51.0 m^3/s) Mar. 20, 1907, gage height, 10.08 ft (3.072 m), present datum, from rating curve extended above 700 ft^3/s (19.8 m^3/s); maximum gage height, 10.3 ft (3.139 m) Dec. 22, 1964; no flow at times in 1931-32, 1934, 1937.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 221 ft^3/s (6.26 m^3/s) Dec. 15, no flow in canal; minimum, 0.08 ft^3/s (0.002 m^3/s) Nov. 21, no flow in canal.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	JG	SEP
1	9.7	1.6	2.4	8.5	12	16	61	151	73	59	50	36
2	10	1.6	2.6	7.2	12	15	63	143	82	59	50	35
3	9.3	1.4	2.5	7.1	12	16	54	141	93	59	52	32
4	8.0	1.4	2.3	7.2	18	17	46	138	97	54	57	32
5	6.5	1.2	2.2	7.4	19	21	42	128	99	50	60	36
6	5.5	1.1	2.2	7.4	24	25	43	116	96	49	59	41
7	4.9	1.1	2.1	7.0	31	25	44	105	97	49	60	43
8	4.1	.93	1.9	7.1	37	37	38	101	97	48	56	37
9	2.9	.93	1.8	8.1	27	66	33	100	97	42	57	33
10	2.6	.84	1.9	14	20	57	31	122	97	39	57	36
11	2.5	.75	2.1	19	16	46	30	137	93	38	57	33
12	2.5	.66	1.9	20	14	39	30	126	92	41	47	29
13	2.5	.66	1.9	20	14	32	29	118	91	42	44	29
14	3.0	.57	16	32	13	28	30	118	87	44	46	29
15	4.0	.57	140	65	13	24	34	119	78	44	47	28
16	4.9	.50	41	61	13	23	39	129	77	50	38	28
17	5.3	.40	25	49	12	23	44	126	76	47	36	28
18	6.2	.30	18	38	12	25	51	115	75	46	35	28
19	6.3	.30	14	34	12	26	56	109	76	48	35	29
20	3.9	.30	12	37	12	29	63	93	76	50	35	29
21	2.9	.39	13	33	12	31	71	84	77	49	34	31
22	2.7	1.4	14	23	12	35	76	80	74	39	34	30
23	2.5	1.1	14	15	12	42	76	72	73	41	33	29
24	2.3	2.1	14	10	14	48	73	57	79	38	33	30
25	2.1	2.1	13	11	18	43	72	53	73	36	33	30
26	2.1	1.2	12	12	19	41	81	56	68	34	31	27
27	2.1	1.7	12	14	18	40	125	52	67	36	31	23
28	1.9	2.5	14	17	17	41	141	51	65	35	33	21
29	1.7	3.1	15	13	---	43	135	47	68	44	33	18
30	1.7	3.0	11	12	---	47	134	42	66	50	35	18
31	1.7	---	9.4	12	---	48	---	44	---	50	34	---
TOTAL	128.3	35.70	435.2	628.0	465	1049	1845	3073	2459	1410	1342	908
MEAN	4.14	1.19	14.0	20.3	16.6	33.8	61.5	99.1	82.0	45.5	43.3	30.3
MAX	10	3.1	140	65	37	66	141	151	99	59	60	43
MIN	1.7	.30	1.8	7.0	12	15	29	42	65	34	31	18
AC-FT	254	71	863	1250	922	2080	3660	6100	4880	2800	2660	1800

CAL YR 1977 TOTAL 6202.40 MEAN 17.0 MAX 140 MIN .30 AC-FT 12300
WTR YR 1978 TOTAL 13778.20 MEAN 37.7 MAX 151 MIN .30 AC-FT 27330

10393500 SILVIES RIVER NEAR BURNS, OR

LOCATION.--Lat 43°42'55", long 119°10'35", in NW¼NW¼ sec.31, T.21 S., R.30 E., Harney County, Hydrologic Unit 17120002, on left bank 5 mi (8 km) downstream from Emigrant Creek and 11 mi (18 km) northwest of Burns.

DRAINAGE AREA.--934 mi^2 (2,419 km^2).

PERIOD OF RECORD.--May 1903 to July 1906, December 1908 to December 1912, March 1913 to September 1917 (irrigation seasons only), March 1918 to October 1920, March 1921 to July 1922 (irrigation seasons only), October 1922 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,195 ft (1,279 m) National Geodetic Vertical Datum of 1929 (river-profile survey). See WSP 1734 for history of changes prior to Oct. 4, 1951.

REMARKS.--Records good except those between 100 ft^3/s (2.83 m^3/s) and 500 ft^3/s (14.2 m^3/s), which are fair. No regulation. Diversions for irrigation above station during periods of high flow only.

AVERAGE DISCHARGE.--65 years (water years 1904-5, 1910-12, 1918-21, 1923-78), 165 ft^3/s (4.673 m^3/s), 119,500 acre-ft/yr (147 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,960 ft^3/s (140 m^3/s) Apr. 6, 1952, gage height, 15.2 ft (4.63 m); no flow July 19 to Sept. 22, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,010 ft^3/s (56.9 m^3/s) Apr. 2, gage height, 12.89 ft (3.929 m); minimum, 7.4 ft^3/s (0.21 m^3/s) Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	16	39	59	70	170	1400	700	174	85	22	22
2	9.0	15	40	55	72	165	1900	648	170	80	21	21
3	8.6	14	44	73	82	164	1610	607	165	76	20	20
4	8.6	15	46	77	89	173	1680	575	161	75	19	18
5	8.2	17	43	75	92	186	1450	545	156	75	19	18
6	8.2	18	39	74	90	248	1270	508	151	73	18	18
7	7.8	17	41	69	90	292	1180	479	146	71	18	19
8	7.8	16	33	70	90	454	1020	450	128	85	18	22
9	7.8	14	30	74	85	705	925	429	106	81	18	24
10	8.2	15	32	86	80	589	866	454	112	71	18	26
11	7.8	16	33	88	78	660	839	471	120	65	18	28
12	8.2	16	36	82	75	546	803	470	122	62	16	30
13	8.6	16	34	77	75	472	750	455	117	60	16	30
14	8.6	16	40	81	75	411	715	433	110	55	16	30
15	8.6	16	122	121	70	363	686	412	111	51	17	29
16	9.0	16	90	132	60	372	669	410	109	47	18	28
17	9.0	14	70	127	62	442	672	375	108	43	18	27
18	9.0	13	55	110	66	572	649	355	105	40	19	27
19	11	11	45	90	74	729	623	340	108	40	19	28
20	19	10	45	80	80	922	589	324	108	39	19	30
21	12	10	50	75	90	992	575	307	105	36	19	30
22	11	11	60	70	95	1020	549	290	100	34	19	30
23	12	15	70	70	110	1080	542	272	77	32	22	30
24	12	15	75	65	140	1120	519	259	83	31	25	29
25	12	15	80	65	170	1020	518	254	96	30	26	28
26	13	25	70	65	240	1020	655	246	100	28	25	28
27	14	47	72	70	210	1070	779	235	85	26	25	33
28	14	44	77	70	185	1140	778	224	81	26	24	33
29	15	44	74	70	---	1200	760	207	80	26	23	32
30	16	41	73	70	---	1210	726	192	90	24	22	30
31	16	---	71	70	---	1180	---	180	---	23	22	---
TOTAL	329.5	568	1729	2460	2795	20687	26697	12106	3484	1590	619	798
MEAN	10.6	18.9	55.8	79.4	99.8	667	890	391	116	51.3	20.0	26.6
MAX	19	47	122	132	240	1210	1900	700	174	85	26	33
MIN	7.8	10	30	55	60	164	518	180	77	23	16	18
AC-FT	654	1130	3430	4880	5540	41030	52950	24010	6910	3150	1230	1580

CAL YR 1977 TOTAL 9844.14 MEAN 27.0 MAX 122 MIN .75 AC-FT 19530
WTR YR 1978 TOTAL 73862.50 MEAN 202 MAX 1900 MIN 7.8 AC-FT 146500

COMBINED MONTHLY DISCHARGE OF EAST FORK SILVIES RIVER, WEST FORK SILVIES RIVER AND FLOOD BYPASS NEAR LAWEN, OR

The combined flow of the East Fork Silvies River, West Fork Silvies River, and flood bypass provide an estimate of the total flow entering Malheur Lake from the Silvies River Basin.

10395000 EAST FORK SILVIES RIVER NEAR LAWEN, OR.--Lat 43°25'35", long 118°48'05", in SW¼ sec.5, T.25 S., R.32½ E., Harney County, Hydrologic Unit 17120002, on left bank downstream side of road bridge, 1.6 mi (2.6 km) south of Lawen, and 15.2 mi (24.5 km) southeast of Burns. Records available March to June 1916, March 1972 to September 1976. October 1976 to current year (monthly estimated discharge only).

10395500 WEST FORK SILVIES RIVER NEAR LAWEN, OR.--Lat 43°23'00", long 118°50'03", in SE¼SW¼ sec.24, T.25 S., R.32 E., Harney County, Hydrologic Unit 17120002, near right bank on upstream side of bridge on county road, 4.9 mi (7.9 km) southwest of Lawen. Records available March to July 1916, April to July 1917, April to June 1919, April to June 1922, March 1972 to September 1976. October 1976 to current year (monthly estimated discharge only).

10395600 FLOOD BYPASS.--During heavy runoff periods flood water bypasses the East Fork Silvies River and West Fork Silvies River crossing the county road at several bridges and culverts between the East Fork and West Fork. Monthly estimated discharge record available March 1972 to current year.

REMARKS.--Records poor. East Fork and West Fork Silvies River are distributaries that originate at bifurcation of Silvies River 20 mi (32 km) upstream. Diversion by flooding for irrigation of many thousand acres above measuring points. Flows are estimated on the basis of periodic flow measurements, observations of no flow, and hydrographic comparison with upstream station.

Runoff in acre-feet

	(10395000) East Fork Silvies River	(10395500) West Fork Silvies River	(10395600) Flood Bypass	Combined flow of East Fork Silvies West Fork Silvies and flood bypass
October 1977......................	0	0	0	0
November..........................	0	0	0	0
December..........................	0	0	0	0
CAL YR 1977....................	0	0	0	0
January 1978......................	0	0	0	0
February..........................	0	0	0	0
March.............................	1,200	100	100	1,400
April.............................	6,700	400	19,700	26,800
May...............................	2,700	100	7,100	9,900
June..............................	200	20	380	600
July..............................	0	0	0	0
August............................	0	0	0	0
September.........................	0	0	0	0
WTR YR 1978....................	10,800	600	27,300	38,700

10396000 DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OR
(National stream-quality accounting network station)

LOCATION.--Lat 42°47'28", long 118°52'00", in NW¼NW¼ sec.20, T.32 S., R.32½ E., Harney County, Hydrologic Unit 17120003, Bureau of Land Management land, on left bank 1.5 mi (2.4 km) upstream from upper diversions for Malheur Migratory Waterfowl Refuge, 2.0 mi (3.2 km) downstream from Fish Creek, and 3.5 mi (5.6 km) southeast of Frenchglen.

DRAINAGE AREA.--200 mi^2 (518 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1911 to September 1913, March 1914 to September 1916, April 1917 to September 1921, August to November 1929, April to September 1930, December 1937 to current year. Monthly discharge only for some periods, published in WSP 1314. Published as "near Diamond" 1911-21. Records of discharge for January 1909 to September 1910 (published in WSP 270, 290, and 370, for a non-equivalent site as "near Diamond") have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 330: Drainage area (former site). WSP 860: Drainage area (present site). WSP 1564: 1938-39(M), 1942-43(M), 1948(M), 1951(P), 1952-53. WSP 1714: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,254 ft (1,297 m) National Geodetic Vertical Datum of 1929 (levels by Fish and Wildlife Service). Prior to December 1937, nonrecording gage at several sites within 2 mi (3 km) downstream at different datums. Dec. 6, 1937, to Feb. 14, 1938, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--48 years (water years 1912-13, 1915-16, 1918-21, 1939-78), 120 ft^3/s (3.398 m^3/s), 86,940 acre-ft/yr (107 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,270 ft^3/s (121 m^3/s) Apr. 26, 1978, gage height, 7.15 ft (2.179 m) from floodmarks, from rating curve extended above 1,900 ft^3/s (53.8 m^3/s) on basis of slope-area measurement of peak flow; minimum, 4.2 ft^3/s (0.12 m^3/s) Dec. 9, 1972, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 650 ft^3/s (18.4 m^3/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
Mar. 5	2400	701	19.9	3.85	1.173	Apr. 26	2030	*4,270a	122	*7.15b	2.179
Apr. 1	2000	1,050	29.7	4.39	1.338	May 9	0030	657	18.6	3.78	1.152

Minimum discharge, 6.7 ft^3/s (0.19 m^3/s) Nov. 20, result of freezeup.

a From rating curve extended above 1,900 ft^3/s (53.8 m^3/s) on basis of slope-area measurement of peak flow.
b From floodmarks.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	30	37	27	44	76	688	480	394	230	67	48
2	33	30	37	50	46	76	621	417	381	216	64	47
3	32	30	38	54	128	237	399	403	373	210	61	46
4	32	29	42	56	148	233	308	368	403	206	59	44
5	31	31	34	52	206	265	265	331	460	177	62	47
6	30	31	37	48	220	426	269	304	532	171	61	57
7	31	29	38	42	162	227	251	284	548	171	57	76
8	31	27	30	59	123	273	216	292	548	187	56	75
9	30	29	32	304	88	213	213	323	604	177	54	62
10	30	30	34	308	71	162	233	373	537	190	53	64
11	30	28	36	138	57	148	258	360	394	193	53	73
12	30	28	36	107	50	116	240	331	347	165	51	66
13	29	28	34	220	57	96	244	364	351	154	59	62
14	29	28	66	335	48	94	244	475	356	151	59	61
15	29	29	151	296	50	90	223	575	323	148	54	59
16	29	28	56	165	39	104	227	450	296	140	75	57
17	29	25	50	168	51	174	203	399	284	128	61	57
18	28	27	35	116	46	180	190	394	308	118	56	59
19	28	25	30	104	82	168	187	399	269	113	53	61
20	28	15	18	107	120	190	193	441	300	111	51	62
21	28	27	48	96	125	206	180	480	323	100	50	61
22	29	29	45	80	130	280	168	532	327	94	56	59
23	29	27	50	56	143	300	162	460	308	92	59	59
24	30	35	51	36	174	254	168	394	284	88	51	59
25	29	47	48	45	157	240	220	347	233	90	50	57
26	30	113	45	48	157	277	1310	308	213	86	50	56
27	30	76	42	48	118	292	1950	304	220	88	50	54
28	30	56	44	47	88	323	707	351	277	82	48	53
29	30	43	48	51	---	356	516	399	262	76	47	53
30	31	40	43	50	---	368	475	377	240	71	48	51
31	30	---	34	54	---	377	---	377	---	71	54	---
TOTAL	931	1050	1369	3367	2928	6821	11528	12092	10695	4294	1729	1745
MEAN	30.0	35.0	44.2	109	105	220	384	390	357	139	55.8	58.2
MAX	36	113	151	335	220	426	1950	575	604	230	75	76
MIN	28	15	18	27	39	76	162	284	213	71	47	44
AC-FT	1850	2080	2720	6680	5810	13530	22870	23980	21210	8520	3430	3460

CAL YR 1977 TOTAL 23430 MEAN 64.2 MAX 465 MIN 15 AC-FT 46470
WTR YR 1978 TOTAL 58549 MEAN 160 MAX 1950 MIN 15 AC-FT 116100

10396000 DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.
SPECIFIC CONDUCTANCE: October 1975 to current year.
WATER TEMPERATURES: October 1975 to current year.

REMARKS.--No temperature record Sept. 5-30.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 219 micromhos July 23, 1976; minimum daily, 24 micromhos May 31, 1977.
WATER TEMPERATURES: Maximum, 28.5°C July 31, 1977; minimum, 0.0°C many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 113 micromhos Nov. 29; minimum daily, 53 micromhos May 23.
WATER TEMPERATURES: Maximum, 26.0°C Aug. 9; minimum recorded, 0.0°C on many days during November to February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
OCT 04...	1100	35	7.8	7.9	86	K14	--	7.8	9.4	3.2	4.9	1.4
NOV 08...	1010	35	.5	7.8	90	K8	K5	28	8.6	3.1	5.3	1.3
DEC 06...	1110	38	3.0	7.5	86	>600	--	26	8.6	3.6	4.7	1.2
JAN 04...	1130	60	.2	7.3	79	K3	130	26	8.0	3.2	4.8	1.3
31...	1100	52	1.8	7.4	82	--	--	27	11	3.2	5.0	1.4
FEB 28...	1130	71	4.0	7.3	74	<1	K2	24	6.5	3.1	4.7	1.6
MAR 28...	1030	292	6.2	7.2	63	K14	K6	23	5.8	2.4	3.4	1.0
APR 25...	1130	190	10.0	7.5	70	K6	K6	25	7.0	2.7	3.5	.9
MAY 31...	1210	398	6.8	7.3	51	K5	24	19	5.1	2.3	3.1	1.0
JUN 27...	1030	229	11.8	7.2	52	K11	31	17	4.9	1.9	3.0	.8
AUG 01...	1015	70	15.2	7.8	78	48	K450	26	6.9	2.9	4.2	1.3
SEP 06...	1600	64	14.5	8.3	85	23	66	26	9.3	3.2	5.0	1.3

DATE	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS P)
OCT 04...	44	3.8	.9	.1	--	--	.02	.14	--	--	.02
NOV 08...	45	1.2	.9	.1	.12	--	.00	.17	--	.04	.04
DEC 06...	43	2.2	.7	.0	.26	--	.06	.32	--	.03	.03
JAN 04...	38	3.6	1.5	.3	.88	--	--	--	--	.04	.07
31...	41	3.5	1.7	.1	.05	.18	.01	.24	.35	.09	.10
FEB 28...	30	3.3	1.5	.1	--	.17	.04	.12	.33	.05	.10
MAR 28...	29	2.4	1.2	.1	1.1	1.2	.03	.40	1.6	.04	.06
APR 25...	35	3.6	.8	.1	.40	.89	.01	.09	.99	.05	.08
MAY 31...	26	5.8	.9	.1	--	.29	.03	.08	.40	.00	.07
JUN 27...	23	3.8	.4	.0	--	.20	.00	.04	.24	.03	.08
AUG 01...	39	1.5	.6	.1	.32	.30	.02	.11	.43	.00	.01
SEP 06...	41	2.6	1.0	.1	--	.45	.03	.14	.62	.02	.03

10396000 DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 04...	1.1	37	0	66	58	6.24	2	--	3	.28	75
NOV 08...	--	34	0	74	76	6.99	3	--	14	1.3	74
DEC 06...	1.4	36	0	74	73	7.59	3	--	18	1.8	70
JAN 04...	--	33	0	74	72	12.0	10	--	31	5.0	68
31...	3.9	41	0	79	78	11.1	15	--	--	--	--
FEB 28...	5.0	29	0	87	63	16.8	25	--	25	4.8	74
MAR 28...	--	24	0	67	57	52.8	65	--	0	.20	0
APR 25...	3.0	29	0	65	65	33.3	7	--	30	15	78
MAY 31...	1.8	22	0	49	53	52.7	9	--	51	55	84
JUN 27...	--	20	0	44	46	27.2	--	4.5	48	30	74
AUG 01...	1.9	29	0	63	67	11.9	--	2.1	7	1.3	74
SEP 06...	2.0	36	0	71	73	12.3	--	.90	11	1.9	85

DATE	IRON, DIS- SOLVED (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)
OCT 04...	30	220	0	10	0	0	0	200	0
JAN 04...	140	1200	10	20	0	1	0	0	0
MAR 28...	190	7300	10	200	1	1	0	100	1
JUN 27...	70	1900	0	30	0	0	200	200	0
AUG 01...	60	190	3	10	2	--	200	200	1

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
OCT 04...	10	0	0	0	<50	1	<10	0	<100
JAN 04...	1	0	10	0	0	3	27	0	9
MAR 28...	4	0	0	1	4	5	33	10	10
JUN 27...	0	0	10	0	1	2	12	0	6
AUG 01...	1	0	0	<1	2	2	6	1	5

DATE	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL (UG/L AS SE)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
OCT 04...	0	<10	20	40	0	0	.0	.0
JAN 04...	0	0	20	40	0	0	.0	.0
MAR 28...	0	0	30	40	0	0	.0	.0
JUN 27...	0	0	0	0	0	0	.0	.0
AUG 01...	0	0	10	10	0	--	.0	--

10396000 DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO JUNE 1978

DATE	OCT 4,77	NOV 8,77	FEB 28,78	APR 25,78	MAY 31,78	JUN 27,78
TIME	1100	1010	1130	1130	1210	1030
TOTAL CELLS/ML	590	1500	270	280	73	0
DIVERSITY: DIVISION	1.4	1.1	1.1	0.0	0.5	0.0
.CLASS	1.4	1.1	1.1	0.0	0.5	0.0
..ORDER	1.6	1.1	1.4	0.0	0.5	0.0
...FAMILY	2.8	2.9	2.6	1.7	2.2	0.0
....GENUS	3.1	3.0	2.9	1.7	2.2	0.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..CHLOROCOCCALES												
...OOCYSTACEAE												
....ANKISTRODESMUS	18	3	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE												
....SCENEDESMUS	4	1	77	5	--	-	--	-	--	-	--	-
..TETRASPORALES												
...COCCOMYXACEAE												
....DISPORA	36	6	--	-	--	-	--	-	--	-	--	-
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	--	-	8	3	--	-	--	-	--	-
..ZYGNEMATALES												
...DESMIDIACEAE												
....COSMARIUM	18	3	11	1	--	-	--	-	--	-	--	-
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..CENTRALES												
...COSCINODISCACEAE												
....MELOSIRA	--	-	--	-	16	6	--	-	--	-	--	-
..PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	-	--	-	8	3	--	-	--	-	--	-
....COCCONEIS	22	4	77	5	24	9	--	-	--	-	--	-
....RHOICOSPHENIA	--	-	55	4	--	-	--	-	--	-	--	-
...CYMBELLACEAE												
....CYMBELLA	9	2	130	9	16	6	140#	50	9	13	--	-
...DIATOMACEAE												
....DIATOMA	--	-	22	1	--	-	--	-	--	-	--	-
...EUNOTIACEAE												
....EUNOTIA	--	-	--	-	--	-	--	-	9	13	--	-
...FRAGILARIACEAE												
....FRAGILARIA	4	1	--	-	32	12	--	-	--	-	--	-
....SYNEDRA	31	5	250#	17	16	6	40	14	--	-	--	-
...GOMPHONEMATACEAE												
....GOMPHONEMA	36	6	150	10	*	0	20	7	--	-	--	-
...MERIDIONACEAE												
....MERIDION	--	-	--	-	16	6	--	-	--	-	--	-
...NAVICULACEAE												
....NAVICULA	160#	26	270#	19	--	-	--	-	27#	38	--	-
...NITZSCHIACEAE												
....NITZSCHIA	53	9	88	6	40#	15	80#	29	18#	25	--	-
.CHRYSOPHYCEAE												
..CHRYSOMONADALES												
...OCHROMONADACEAE												
....DINOBRYON	--	-	*	0	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
.CRYPTOPHYCEAE												
..CRYPTOMONIDALES												
...CRYPTOCHRYSIDACEAE												
....CHROOMONAS	4	1	--	-	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROCCOCCALES												
...CHROCCOCCAEAE												
....ANACYSTIS	--	-	--	-	--	-	--	-	9	13	--	-
..HORMOGONALES												
...NOSTOCACEAE												
....ANABAENA	4	1	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE												
....ARTHROSPIRA	62	11	--	-	--	-	--	-	--	-	--	-
....OSCILLATORIA	--	-	330#	22	80#	33	--	-	--	-	--	-
....SCHIZOTHRIX	130#	23	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

10396000 DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
OCT 04...	27	5.20	6.06	1.01	.010
JAN 04...	29	1.02	1.34	.390	.000
MAR 28...	28	.079	.236	.080	.000
JUN 27...	--	7.72	8.58	1.99	.390

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	86	110	---	86	---	58	89	---	61	79	88
2	---	87	101	---	87	---	61	89	---	62	79	89
3	---	87	101	---	84	---	65	88	---	63	78	88
4	---	87	94	---	85	---	68	85	---	64	77	89
5	88	87	91	---	87	---	69	84	---	66	77	89
6	89	87	88	---	83	---	69	84	---	67	77	88
7	88	87	86	---	87	77	71	83	---	66	78	87
8	88	90	85	---	89	76	71	82	---	64	78	87
9	88	91	86	---	92	74	71	79	---	64	79	90
10	88	89	81	71	93	76	69	75	---	62	80	90
11	88	88	80	78	94	76	68	74	---	61	80	87
12	88	88	79	82	95	80	69	74	---	64	81	89
13	88	87	77	82	96	78	69	74	---	65	81	90
14	88	85	77	77	97	78	68	74	---	66	82	90
15	88	83	90	77	96	78	70	63	---	66	83	91
16	89	83	94	80	97	77	69	64	---	66	81	90
17	89	81	99	81	---	71	70	65	---	69	80	90
18	88	83	98	---	---	68	72	64	---	70	83	90
19	89	84	101	---	---	70	72	63	---	71	84	90
20	89	91	103	---	---	70	71	61	---	71	85	98
21	89	86	99	---	---	70	72	59	---	72	85	88
22	89	76	92	---	---	68	73	54	---	73	84	88
23	88	73	86	---	---	68	74	53	---	73	84	89
24	88	70	83	---	---	67	74	54	---	74	85	92
25	88	69	83	---	---	69	72	55	---	74	86	89
26	88	77	85	---	---	67	72	56	---	74	86	87
27	89	98	80	---	---	64	87	57	---	74	87	89
28	88	107	---	---	---	63	93	55	55	75	87	89
29	88	113	---	---	---	61	93	---	58	77	88	89
30	87	111	---	---	---	62	90	---	61	78	86	88
31	87	---	---	---	---	62	---	---	---	79	87	---
MEAN	88	87	90	79	91	71	72	70	58	69	82	89

10396000 DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.5	4.5	9.5	4.5	5.0	2.5	.5	.0	2.5	.5	7.5	1.5
2	15.0	5.5	7.5	5.0	6.5	3.5	.0	.0	3.5	.5	6.5	2.5
3	15.0	6.0	7.5	2.0	7.0	4.0	.5	.0	6.5	3.0	6.0	4.5
4	14.0	5.5	8.5	3.0	5.5	2.0	1.0	.0	4.0	1.5	4.5	3.0
5	13.5	5.0	8.5	5.5	4.0	.5	2.5	.5	5.0	2.5	5.5	3.5
6	12.0	8.0	8.5	4.5	5.0	1.5	3.5	1.0	3.0	2.0	7.5	2.5
7	13.5	5.0	7.0	2.5	4.5	1.0	3.5	.0	4.0	2.0	6.5	4.0
8	14.0	4.5	6.0	.5	2.5	.0	4.0	1.5	3.5	.5	6.0	4.5
9	13.0	4.5	4.5	.5	2.0	.0	2.5	1.5	5.0	1.5	5.0	3.5
10	13.0	4.0	8.0	1.5	4.0	.5	3.5	1.5	2.5	.5	8.0	3.0
11	13.5	4.0	7.0	3.0	4.0	2.0	3.0	.5	3.0	.0	5.0	3.0
12	14.0	5.0	9.5	4.5	4.5	1.5	3.5	1.5	.5	.0	4.0	1.5
13	14.0	6.5	8.5	4.5	6.0	3.0	4.5	3.0	4.0	.0	5.5	1.5
14	15.5	7.0	7.5	3.5	7.0	5.5	3.5	2.5	5.0	.0	8.0	1.5
15	15.5	6.5	9.0	5.0	5.5	1.0	3.5	2.0	4.0	.0	9.5	1.5
16	15.0	7.0	8.0	3.0	1.5	.5	4.0	2.5	1.0	.0	11.0	3.5
17	15.0	6.0	4.5	.5	2.0	.0	3.5	2.5	3.5	.0	10.5	5.0
18	15.0	6.0	.5	.5	2.0	.0	3.0	1.0	6.5	1.5	10.0	5.5
19	14.5	7.0	.5	.0	.5	.0	4.0	1.5	7.0	3.5	11.0	6.5
20	12.5	6.5	.5	.5	.5	.0	5.0	3.0	8.0	1.5	10.5	5.5
21	12.0	5.5	.5	.0	.0	.0	4.5	1.5	7.0	2.0	9.5	6.5
22	12.0	4.0	.5	.0	.5	.0	3.5	1.0	6.0	2.5	9.0	7.0
23	9.0	6.5	.5	.0	.5	.0	2.0	.0	6.5	2.5	7.0	5.5
24	14.0	6.5	1.5	.5	1.0	.0	.5	.0	5.0	3.0	8.0	4.0
25	13.5	9.0	5.5	.5	1.0	.0	.5	.0	6.5	2.5	10.0	6.5
26	12.5	8.5	4.0	3.0	1.0	.0	1.5	.0	5.0	3.0	9.5	7.0
27	9.0	6.5	5.5	2.5	.5	.0	4.5	.0	5.5	2.5	9.5	5.5
28	9.5	6.5	5.0	1.0	1.0	.0	4.5	.0	8.0	1.5	10.0	5.5
29	9.5	---	6.5	3.5	1.5	.0	6.0	1.5	---	---	10.0	5.5
30	9.0	5.0	6.0	2.5	3.0	.5	5.0	.5	---	---	9.5	6.5
31	7.0	4.0	---	---	1.5	.0	4.0	.5	---	---	8.5	5.5
MONTH	15.5	4.0	9.5	.0	7.0	.0	6.0	.0	8.0	.0	11.0	1.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.5	3.5	10.0	6.0	11.5	7.0	16.0	11.5	24.5	14.5	20.0	14.0
2	7.5	2.0	11.0	7.5	10.5	7.0	15.5	11.5	25.0	15.0	21.0	13.5
3	7.0	4.0	11.0	7.5	13.5	7.0	15.0	11.0	25.0	15.5	20.0	13.5
4	6.5	5.0	8.5	5.0	13.5	7.5	14.0	10.5	22.0	17.5	16.0	14.5
5	5.0	4.0	7.0	3.5	14.0	8.0	14.5	10.5	24.5	16.5	---	13.0
6	5.0	6.0	7.5	5.5	13.0	7.5	17.5	11.5	25.0	16.0	---	---
7	4.5	4.0	10.5	6.0	13.5	7.5	15.0	12.5	25.0	17.0	---	---
8	9.0	4.0	12.5	8.0	14.5	7.5	17.0	11.0	25.5	16.5	---	---
9	10.5	6.0	11.5	9.5	13.0	8.0	19.0	12.5	26.0	18.0	---	---
10	11.5	7.5	10.5	7.5	11.0	7.0	18.5	13.5	25.0	16.5	---	---
11	10.5	8.0	9.5	7.5	12.5	6.0	17.5	12.5	24.5	15.0	---	---
12	9.5	5.5	10.5	5.5	12.5	9.5	18.5	12.5	22.0	14.5	---	---
13	10.0	6.5	11.0	8.0	13.0	8.5	20.0	14.0	17.5	13.5	---	---
14	8.5	7.0	12.5	8.0	11.5	8.0	21.5	14.0	20.5	10.0	---	---
15	8.0	6.0	9.5	6.0	12.0	7.5	21.5	16.0	20.0	12.0	---	---
16	7.0	5.0	7.5	5.0	13.5	8.0	19.5	14.0	18.5	13.5	---	---
17	7.0	3.5	10.5	5.0	15.0	9.0	20.0	13.0	18.5	11.0	---	---
18	10.5	5.0	10.0	6.5	13.5	9.0	21.0	13.5	20.5	10.0	---	---
19	10.0	7.0	11.0	7.0	15.0	8.0	22.0	14.0	21.0	11.5	---	---
20	7.5	4.5	11.5	7.5	14.5	10.5	21.0	14.5	21.0	12.5	---	---
21	6.5	4.0	12.5	7.5	14.5	10.0	21.5	13.5	18.5	12.5	---	---
22	8.5	4.5	10.5	5.5	14.5	9.5	23.0	14.0	17.5	11.5	---	---
23	9.5	5.0	8.0	5.5	14.5	10.0	23.0	15.5	19.5	11.0	---	---
24	10.5	7.5	6.0	4.5	13.5	9.5	24.0	15.5	19.5	11.0	---	---
25	10.0	8.0	8.5	4.5	13.0	7.5	24.0	16.0	20.0	11.0	---	---
26	8.0	4.0	9.0	6.0	15.0	10.5	23.5	17.5	19.5	11.5	---	---
27	6.0	3.0	13.0	7.5	17.0	10.5	25.0	16.5	21.5	12.5	---	---
28	9.5	4.0	13.5	8.5	14.0	11.0	25.0	17.0	22.5	13.5	---	---
29	10.0	5.5	12.0	7.5	15.5	10.5	25.0	16.0	22.5	16.0	---	---
30	10.0	6.5	10.5	6.0	16.5	11.5	25.0	16.0	22.5	14.0	---	---
31	---	---	11.0	6.0	---	---	24.5	16.0	22.5	14.0	---	---
MONTH	11.5	2.0	13.5	3.5	17.0	6.0	25.0	10.5	26.0	10.0	21.0	13.0

10401800 MALHEUR LAKE NEAR VOLTAGE, OR

LOCATION.--Lat 43°17'30", long 118°49'05", in NE¼NE¼ sec.25, T.26 S., R.31 E., Harney County, Hydrologic Unit 17120001, in Malheur National Wildlife Refuge, 2.0 mi (3.2 km) north of Voltage.

DRAINAGE AREA.--2,150 mi^2 (5,570 km^2), approximately.

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,088.52 ft (1,246.181 m) National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations NGVD.

REMARKS.--Many diversions on inflow streams for irrigation of many thousands of acres above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 4,093.90 ft (1,247.821 m) May 31, 1978; minimum recorded, 4,090.60 ft (1,246.815 m) Oct. 2, 3, 16, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation observed since 1938, 4,095.39 ft (1,248.275 m), occurred in 1952, from records of Malheur National Wildlife Refuge for staff gage in channel of Donner und Blitzen River; entire bed of lake dry September 1934.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 4,093.90 ft (1,247.821 m) May 31; minimum recorded, 4,091.03 ft (1,246.946 m) Oct. 24, Nov. 2.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4091.06	4091.04				---	4092.54	4093.39	4093.84	4093.74	4093.23	4092.76
2	4091.06	4091.07				---	4092.58	4093.40	4093.82	4093.74	4093.20	4092.74
3	4091.07	4091.07				---	4092.64	4093.45	4093.82	4093.72	4093.18	4092.72
4	4091.07	4091.07				---	4092.62	4093.44	4093.81	4093.72	4093.16	4092.70
5	4091.07	4091.07				---	4092.71	4093.52	4093.81	4093.73	4093.14	4092.71
6	4091.07	4091.07				---	4092.72	4093.55	4093.81	4093.72	4093.13	4092.71
7	4091.07	4091.07				4092.52	4092.75	4093.57	4093.80	4093.72	4093.12	4092.74
8	4091.07	4091.08				4092.56	4092.75	4093.61	4093.78	4093.70	4093.10	4092.76
9	4091.07	4091.09				4092.57	4092.77	4093.62	4093.76	4093.70	4093.08	4092.77
10	4091.07	4091.11				4092.58	4092.78	4093.61	4093.75	4093.68	4093.06	4092.78
11	4091.07	4091.09				4092.57	4092.84	4093.63	4093.79	4093.66	4093.03	4092.79
12	4091.07	4091.09				4092.54	4092.89	4093.72	4093.73	4093.65	4093.00	4092.79
13	4091.07	4091.09				4092.50	4092.85	4093.66	4093.78	4093.63	4092.98	4092.79
14	4091.07	4091.09				4092.56	4092.91	4093.57	4093.75	4093.61	4092.96	4092.79
15	4091.06	4091.10				4092.58	4092.96	4093.68	4093.77	4093.57	4092.95	4092.78
16	4091.06	4091.10				4092.59	4092.90	4093.73	4093.78	4093.55	4092.93	4092.77
17	4091.06	4091.09				4092.57	4092.99	4093.77	4093.78	4093.54	4092.92	4092.76
18	4091.06	4091.10				4092.58	4093.01	4093.78	4093.80	4093.53	4092.91	4092.75
19	4091.06	4091.10				4092.55	4093.00	4093.82	4093.80	4093.52	4092.88	4092.74
20	4091.06	---				4092.57	4093.01	4093.80	4093.80	4093.49	4092.87	4092.74
21	4091.06	---				4092.57	4093.02	4093.78	4093.81	4093.47	4092.87	4092.74
22	4091.06	---				4092.53	4093.04	4093.84	4093.79	4093.45	4092.87	4092.73
23	4091.04	---				4092.52	4093.12	4093.80	4093.78	4093.42	4092.87	4092.73
24	4091.03	---				4092.57	4093.11	4093.80	4093.75	4093.40	4092.84	4092.72
25	4091.04	---				4092.58	4093.11	4093.82	4093.77	4093.39	4092.84	4092.72
26	4091.07	---				4092.58	4093.17	4093.84	4093.78	4093.36	4092.84	4092.70
27	4091.06	---				4092.58	4093.25	4093.85	4093.76	4093.35	4092.83	4092.69
28	4091.07	---				4092.59	4093.32	4093.84	4093.76	4093.32	4092.82	4092.68
29	4091.06	---				4092.46	4093.33	4093.84	4093.74	4093.30	4092.81	4092.68
30	4091.06	---				4092.48	4093.38	4093.85	4093.74	4093.28	4092.77	4092.67
31	4091.06	---				4092.45	---	4093.87	---	4093.25	4092.77	---
MEAN	4091.06	---	---	---	---	---	4092.94	4093.69	4093.78	4093.55	4092.97	4092.74
MAX	4091.07	---	---	---	---	---	4093.38	4093.87	4093.84	4093.74	4093.23	4092.79
MIN	4091.03	---	---	---	---	---	4092.54	4093.39	4093.73	4093.25	4092.77	4092.67

10401830 MALHEUR LAKE AT BREAK IN COLE ISLAND DIKE NEAR VOLTAGE, OR

LOCATION.--Lat 43°19'57", long 118°43'58", in NW¼ sec.11, T.26 S., R.32 E., Harney County, Hydrologic Unit 17120001, in Malheur National Wildlife Refuge, at southernmost break in Cole Island Dike on Malheur Lake, 6.0 mi (9.7 km) northeast of Voltage.

DRAINAGE AREA.--2,150 mi² (5,570 km²), approximately.

PERIOD OF RECORD.--March 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,090.23 ft (1,246.702 m) National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations NGVD.

REMARKS.--Many diversions on inflow streams for irrigation of many thousands of acres above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 4,094.58 ft (1,248.028 m) Apr. 19, 1972; minimum observed, 4,090.73 ft (1,246.855 m) Oct. 17, 1973. Minimum elevations have been less than minimum observed at times during period of record.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation observed since 1938, 4,095.39 ft (1,248.275 m), occurred in 1952, from records of Malheur National Wildlife Refuge for staff gage in channel of Donner und Blitzen River; entire bed of lake dry September 1934.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 4,093.86 ft (1,247.808 m) May 28; minimum recorded, 4,092.48 ft (1,247.388 m) Mar. 31, but may have been less during period Oct. 1 to Mar. 28.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	4092.65	4093.41	4093.83	4093.74	4093.25	4092.78
2						---	4092.65	4093.45	4093.83	4093.78	4093.23	4092.78
3						---	4092.66	4093.46	4093.82	4093.77	4093.21	4092.76
4						---	4092.70	4093.50	4093.82	4093.75	4093.20	4092.74
5						---	4092.77	4093.52	4093.82	4093.75	4093.19	4092.74
6						---	4092.78	4093.56	4093.82	4093.75	4093.17	4092.74
7						---	4092.82	4093.58	4093.80	4093.78	4093.15	4092.81
8						---	4092.80	4093.61	4093.81	4093.76	4093.12	4092.80
9						---	4092.81	4093.65	4093.79	4093.75	4093.11	4092.81
10						---	4092.87	4093.68	4093.79	4093.72	4093.09	4092.82
11						---	4092.86	4093.68	4093.78	4093.70	4093.06	4092.82
12						---	4092.89	4093.65	4093.81	4093.69	4093.04	4092.81
13						---	4092.93	4093.74	4093.79	4093.67	4093.02	4092.81
14						---	4092.97	4093.75	4093.79	4093.64	4093.00	4092.82
15						---	4092.98	4093.75	4093.78	4093.64	4092.99	4092.82
16						---	4093.02	4093.74	4093.78	4093.58	4092.98	4092.80
17						---	4093.02	4093.75	4093.77	4093.56	4092.96	4092.80
18						---	4093.04	4093.76	4093.77	4093.55	4092.94	4092.79
19						---	4093.06	4093.77	4093.81	4093.53	4092.94	4092.78
20						---	4093.11	4093.80	4093.81	4093.50	4092.92	4092.77
21						---	4093.10	4093.82	4093.83	4093.48	4092.93	4092.77
22						---	4093.12	4093.80	4093.83	4093.46	4092.93	4092.77
23						---	4093.11	4093.80	4093.81	4093.45	4092.92	4092.77
24						---	4093.13	4093.80	4093.81	4093.43	4092.92	4092.77
25						---	4093.21	4093.81	4093.79	4093.41	4092.90	4092.76
26						---	4093.29	4093.82	4093.79	4093.39	4092.87	4092.75
27						---	4093.29	4093.84	4093.78	4093.37	4092.86	4092.75
28						---	4093.33	4093.85	4093.78	4093.34	4092.84	4092.75
29						4092.53	4093.36	4093.83	4093.77	4093.32	4092.82	4092.74
30						4092.51	4093.40	4093.82	4093.75	4093.30	4092.82	4092.73
31						4092.56	---	4093.83	---	4093.28	4092.80	---
MEAN						---	4092.99	4093.70	4093.80	4093.58	4093.01	4092.78
MAX						---	4093.40	4093.85	4093.83	4093.78	4093.25	4092.82
MIN						---	4092.65	4093.41	4093.75	4093.28	4092.80	4092.73

10402000 MALHEUR LAKE OUTLET AT NARROWS, OR

LOCATION.--Lat 43°16'55", long 118°57'50", in SE¼ sec.26, T.26 S., R.30 E., Harney County, Hydrologic Unit 17120001, on highway bridge at The Narrows.

DRAINAGE AREA.--2,150 mi^2 (5,570 km^2), approximately.

PERIOD OF RECORD.--May 1903 to July 1906, September 1909, March to September 1911, April to June 1912, April to August 1913, June 1914, gage heights only. March to July 1916, March 1972, September 1976, October 1976 to current year (monthly estimated discharge only).

REMARKS.--Records poor. Natural storage in Malheur Lake. Diversions for irrigation of thousands of acres above station. Outflow from Malheur Lake flows into Mud Lake when full spills over a sand reef, or is drained, into Harney Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 242 ft^3/s (6.85 m^3/s) Apr. 23, 1972; no flow for long periods each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed, 6.4 ft (1.95 m) May 12-16, 1904 (datum then in use, discharge not determined). A discharge of 841 ft^3/s (23.8 m^3/s) was measured May 5, 1943, gage height, 6.16 ft (1.878 m).

	Runoff in acre-feet
October 1977	0
November	0
December	0
CAL YR 1977	20
January 1978	0
February	0
March	0
April	0
May	980
June	0
July	0
August	0
September	0
WTR YR 1978	980

10403000 SILVER CREEK NEAR RILEY, OR

LOCATION.--Lat 43°41'30", long 119°39'30", in E½ sec.1, T.22 S., R.25 E., Harney County, Hydrologic Unit 17120004, on right bank 0.4 mi (0.6 km) downstream from Rough Creek, 1.4 mi (2.3 km) upstream from Nicoll Creek, and 14 mi (23 km) northwest of Riley.

DRAINAGE AREA.--228 mi^2 (591 km^2).

PERIOD OF RECORD.--June 1951 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,450 ft (1,360 m), by barometer.

REMARKS.--Records good. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--27 years, 42.0 ft^3/s (1.189 m^3/s), 30,430 acre-ft/yr (37.5 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,810 ft^3/s (51.3 m^3/s) Dec. 22, 1964, gage height, 7.49 ft (2.283 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft^3/s (9.91 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 8	1400	524	14.8	4.53	1.381	Apr. 1	1400	*1,220	34.6	*6.43	1.960
Mar. 23	0600	695	19.7	5.08	1.548	Apr. 26	0900	445	12.6	4.22	1.286

Minimum discharge, 1.4 ft^3/s (0.040 m^3/s) Nov. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	2.8	5.4	6.8	21	94	858	279	32	17	4.6	3.1
2	1.8	2.8	5.6	6.1	20	91	743	234	30	16	4.4	3.0
3	1.7	2.6	6.8	7.9	31	91	586	203	28	18	4.2	2.7
4	1.8	2.6	6.8	8.5	33	112	474	179	27	17	4.0	2.6
5	2.0	3.5	6.3	8.5	48	143	391	161	26	15	4.2	2.7
6	2.2	3.5	5.2	7.9	79	148	358	143	24	14	4.0	3.8
7	2.2	3.0	5.4	7.9	70	156	316	129	23	14	3.8	4.8
8	2.3	2.8	5.6	7.9	49	411	266	117	22	14	3.8	4.8
9	2.2	2.1	4.4	9.1	41	432	232	111	22	13	3.6	4.8
10	2.1	2.7	5.0	9.7	34	401	222	120	23	12	3.3	5.4
11	2.1	2.7	4.6	9.0	32	353	226	108	27	11	3.1	5.4
12	2.1	2.7	4.8	8.0	32	289	209	97	23	11	3.1	4.8
13	2.1	2.7	5.2	9.1	31	232	195	91	22	11	3.6	4.4
14	2.1	2.7	6.8	23	34	193	179	83	22	10	4.0	4.4
15	2.1	2.8	25	111	30	167	167	91	21	9.4	4.4	4.2
16	2.0	2.8	16	58	24	160	168	87	19	9.1	5.0	4.0
17	2.0	2.3	12	53	27	190	155	73	18	9.4	4.8	4.0
18	2.0	2.1	8.0	31	26	268	145	65	17	8.8	4.4	4.0
19	2.1	1.9	5.8	26	26	360	137	61	19	8.2	4.0	4.2
20	2.1	1.6	7.4	26	32	477	132	58	17	7.9	3.8	4.2
21	2.1	1.8	9.4	27	40	533	126	55	16	7.3	3.8	3.8
22	2.1	2.2	12	23	49	559	118	53	16	7.1	4.4	3.8
23	2.0	2.8	13	20	61	656	112	49	15	6.8	4.8	3.6
24	2.1	7.6	12	18	80	556	108	48	17	6.3	4.4	3.6
25	2.3	14	10	19	105	482	132	48	24	5.9	4.0	3.5
26	3.1	15	9.1	25	112	485	396	45	20	5.9	4.0	3.5
27	3.3	8.5	8.2	21	109	521	429	42	17	6.1	4.0	3.1
28	3.1	9.4	9.7	24	87	539	414	41	16	5.9	3.6	3.1
29	3.0	5.6	9.4	21	---	527	358	37	24	5.4	3.1	3.1
30	3.0	8.2	9.1	21	---	485	313	34	21	5.0	3.1	3.1
31	2.8	---	7.9	20	---	447	---	33	---	4.8	3.1	---
TOTAL	70.0	127.8	261.9	673.4	1363	10558	8665	2975	648	312.3	122.4	115.5
MEAN	2.26	4.26	8.45	21.7	48.7	341	289	96.0	21.6	10.1	3.95	3.85
MAX	3.3	15	25	111	112	656	858	279	32	18	5.0	5.4
MIN	1.7	1.6	4.4	6.1	20	91	108	33	15	4.8	3.1	2.6
AC-FT	139	253	519	1340	2700	20940	17190	5900	1290	619	243	229

CAL YR 1977 TOTAL 2850.32 MEAN 7.81 MAX 232 MIN .52 AC-FT 5650
WTR YR 1978 TOTAL 25892.30 MEAN 70.9 MAX 858 MIN 1.6 AC-FT 51360

10406500 TROUT CREEK NEAR DENIO, NV

LOCATION.--Lat 42°09'20", long 118°27'30", in SW¼ sec.26, T.39 S., R.36 E., Harney County, Hydrologic Unit 17120009, on right bank 0.4 mi (0.6 km) upstream from bridge at mouth of canyon, 5 mi (8 km) east of Trout Creek Ranch, and 14 mi (23 km) northeast of Denio.

DRAINAGE AREA.--88 mi^2 (228 km^2), approximately.

PERIOD OF RECORD.--March 1911 to March 1912, April 1922 to November 1923, March 1925 to September 1931 (irrigation seasons only), April 1932 to current year. Prior to Oct. 1, 1961, published as "near Denio, Oreg."

REVISED RECORDS.--WSP 1564: 1932, 1933-34(M), 1938(M). WSP 1714: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,351.52 ft (1,326.343 m) National Geodetic Vertical Datum of 1929. Mar. 25, 1911, to Mar. 31, 1912, nonrecording gage at bridge 0.4 mi (0.6 km) downstream at different datum. Apr. 28, 1922, to June 14, 1932, water-stage recorder at site 10 ft (3 m) upstream at datum 0.50 ft (0.152 m) higher.

REMARKS.--Records good. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--47 years (water years 1923, 1933-78), 15.5 ft^3/s (0.439 m^3/s), 11,230 acre-ft/yr (13.8 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 470 ft^3/s (13.3 m^3/s) Aug. 1, 1933, gage height, 5.26 ft (1.603 m), from rating curve extended above 230 ft^3/s (6.51 m^3/s); minimum observed, 0.10 ft^3/s (0.030 m^3/s) Aug. 4, 1930, Aug. 1, Sept. 12, 28, 1934 Probably no flow at times Sept. 1-19, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 6.0 ft (1.83 m), caused by cloudburst, probably occurred in 1924 or 1925.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft^3/s (1.42 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 1	1800	99	2.80	3.34	1.018
Apr. 16	0530	58	1.64	3.06	0.933
May 4	0830	119	3.37	3.48	1.061
May 14	2230	*175	4.96	*3.82	1.164
May 24	1630	103	2.92	3.29	1.003
May 29	1330	75	2.12	3.03	0.924
June 7	0400	75	2.12	3.02	0.920

Minimum, 1.1 ft^3/s (0.031 m^3/s) Nov. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	3.6	7.2	4.0	4.9	18	87	108	54	18	7.3	5.6
2	2.9	3.5	6.6	4.2	5.3	18	79	105	52	17	7.1	4.9
3	2.9	3.6	6.2	5.2	5.8	18	60	112	52	19	7.0	4.2
4	2.9	3.7	6.4	6.5	6.3	18	52	115	55	17	6.8	4.3
5	2.9	4.1	6.8	6.7	6.3	21	45	110	59	16	7.1	4.7
6	2.8	4.1	6.3	6.8	7.0	26	50	99	65	19	7.2	5.6
7	3.0	4.1	6.4	6.2	7.6	24	45	93	66	18	6.8	7.7
8	3.0	3.9	6.3	5.9	7.4	30	43	91	63	17	5.6	7.6
9	3.1	3.8	6.0	6.3	8.7	32	41	92	61	16	4.2	6.2
10	3.0	3.9	7.5	7.2	8.7	33	40	106	65	15	3.4	6.3
11	3.1	3.8	6.4	6.6	8.1	34	43	117	54	14	3.6	6.9
12	3.1	3.8	6.6	6.6	9.7	34	47	117	45	13	3.4	6.3
13	3.0	3.8	8.1	6.6	12	30	50	125	42	12	4.8	6.0
14	2.9	3.9	8.8	7.3	9.1	25	49	157	39	10	5.6	6.1
15	3.0	4.0	14	8.2	9.0	21	49	152	34	7.9	5.2	6.1
16	2.9	3.7	8.2	8.4	16	18	54	117	33	8.2	5.8	6.3
17	3.0	3.2	7.2	8.8	9.5	17	45	95	30	8.7	6.2	6.4
18	2.9	2.3	7.6	8.2	7.6	18	44	84	28	8.6	5.9	6.9
19	2.9	2.1	2.8	9.0	7.9	21	39	79	28	8.3	5.3	7.1
20	2.9	2.0	3.3	8.6	8.4	25	40	80	26	8.2	4.8	7.0
21	3.0	2.2	7.7	8.0	10	29	37	84	24	8.1	4.5	6.8
22	3.1	3.5	12	7.5	12	35	35	90	23	8.2	4.9	6.6
23	3.4	5.9	14	6.9	14	43	33	90	22	7.6	5.3	6.4
24	3.4	6.4	7.7	6.4	15	43	33	89	23	7.2	4.7	6.2
25	3.3	7.4	7.4	7.3	16	40	36	75	24	6.9	4.5	6.1
26	3.5	10	7.1	8.3	17	40	69	62	21	6.6	4.6	5.9
27	3.6	17	6.4	7.1	19	40	79	56	22	6.6	5.1	6.0
28	3.5	9.9	6.2	6.2	18	43	74	59	24	6.6	5.0	6.0
29	3.6	7.6	6.2	5.4	---	49	78	65	22	6.4	4.8	6.0
30	3.6	7.4	6.8	5.1	---	56	91	60	20	6.4	4.7	6.1
31	3.6	---	6.5	4.9	---	64	---	57	---	6.2	5.2	---
TOTAL	96.9	148.2	226.7	210.4	286.3	963	1567	2941	1176	347.7	166.4	184.3
MEAN	3.13	4.94	7.31	6.79	10.2	31.1	52.2	94.9	39.2	11.2	5.37	6.14
MAX	3.6	17	14	9.0	19	64	91	157	66	19	7.3	7.7
MIN	2.8	2.0	2.8	4.0	4.9	17	33	56	20	6.2	3.4	4.2
AC-FT	192	294	450	417	568	1910	3110	5830	2330	690	330	366

CAL YR 1977 TOTAL 1849.12 MEAN 5.07 MAX 22 MIN .50 AC-FT 3670
WTR YR 1978 TOTAL 8313.90 MEAN 22.8 MAX 157 MIN 2.0 AC-FT 16490

GOOSE LAKE BASIN

11339500 DREWS CREEK NEAR LAKEVIEW, OR

LOCATION.--Lat 42°07'10", long 120°34'45", in NW¼NE¼ sec.10, T.40 S., R.18 E., Lake County, Hydrologic Unit 18020001, on left bank 10 ft (3 m) upstream from bridge, 2.0 mi (3.2 km) downstream from Willow Creek, 2.7 mi (4.3 km) downstream from Drews Dam, and 13 mi (21 km) southwest of Lakeview.

DRAINAGE AREA.--212 mi^2 (549 km^2).

PERIOD OF RECORD.--January 1909 to September 1930 (yearly estimate only for water year 1920), March 1931 to September 1936 (irrigation seasons only), April 1937 to September 1938, March 1939 to October 1941, February 1942, April 1942 to September 1952, February 1953 to current year. Monthly discharge only October 1921 to September 1925, published in WSP 1315-A. Published as Drew Creek near Lakeview October 1918 to September 1959.

REVISED RECORDS.--WSP 1565: 1909-10, 1913, 1918(M). WRD Oreg. 1974: 1972(M). WSP 1735: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,827.0 ft (1,471.27 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). See WSP 1931 for history of changes prior to July 4, 1953.

REMARKS.--Records good. Record herein, except average discharge, not adjusted for diversion by North Drews Canal. Since 1912, flow regulated by Drews Reservoir, capacity, 62,550 acre-ft (77.1 hm^3). Diversion for irrigation above station, and since March 1914, North Drews Canal has diverted above station for irrigation of lands west of Lakeview.

AVERAGE DISCHARGE.--47 years (water years 1913-30, 1938, 1940-41, 1947, 1954-78), 71.6 ft^3/s (2.028 m^3/s), 51,870 acre-ft/yr (64.0 hm^3/yr), including diversion by North Drews Canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 3,000 ft^3/s (85.0 m^3/s) Mar. 1, 2, 1910, from rating curve extended above 1,200 ft^3/s (34.0 m^3/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 153 ft^3/s (4.33 m^3/s) Jan. 14, gage height, 2.49 ft (0.759 m); minimum daily, 0.06 ft^3/s (0.002 m^3/s) Nov. 5-12, 17-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	.08	.09	3.3	2.0	7.8	20	12	62	42	69	54
2	3.6	.07	.09	2.3	2.5	7.7	17	12	67	35	70	46
3	3.3	.07	.08	2.6	7.2	16	15	11	67	26	72	45
4	3.8	.07	.08	3.0	5.7	24	13	11	67	22	74	45
5	4.6	.06	.08	4.6	13	34	11	11	70	20	75	45
6	6.8	.06	.08	4.3	13	17	19	11	75	18	75	41
7	8.3	.06	.08	3.3	17	13	28	11	74	19	77	36
8	6.8	.06	.08	4.8	8.3	17	25	14	74	28	77	35
9	5.7	.06	.08	47	6.8	19	18	18	72	28	75	34
10	4.3	.06	.08	27	4.6	12	15	14	68	30	67	34
11	3.8	.06	.08	17	3.6	10	13	13	68	43	62	32
12	3.8	.06	.10	21	3.0	7.6	11	13	64	54	63	29
13	4.6	.07	.10	43	2.8	7.6	11	13	72	54	62	27
14	4.1	.07	12	69	2.8	6.1	12	15	73	55	62	32
15	3.6	.07	18	52	2.5	5.7	12	16	73	57	62	32
16	3.0	.07	2.5	22	2.0	6.1	13	27	73	60	63	32
17	2.3	.06	1.7	18	2.3	7.2	12	34	73	68	63	32
18	2.0	.06	1.4	10	2.5	7.6	11	32	72	70	63	29
19	1.7	.06	1.2	11	6.7	7.9	11	31	66	72	63	21
20	1.6	.06	1.2	10	6.8	7.9	14	32	62	72	66	20
21	1.5	.06	.70	7.6	6.8	7.9	17	35	62	63	66	20
22	1.5	.07	.83	5.7	7.6	7.9	14	40	61	61	64	22
23	1.5	.08	2.7	3.8	7.9	9.3	12	50	61	69	62	25
24	1.4	.09	4.6	3.3	9.3	9.3	12	51	61	73	59	26
25	2.3	.28	2.0	3.0	8.3	7.9	13	51	63	73	58	26
26	.96	.83	1.2	3.3	7.2	7.2	17	51	69	74	57	26
27	.28	.40	1.5	2.8	5.0	7.2	13	51	70	72	57	26
28	.10	.22	1.6	2.8	4.1	6.8	11	50	75	69	55	26
29	.09	.10	3.4	3.0	---	6.5	11	49	68	69	57	26
30	.09	.10	7.6	2.8	---	6.8	11	48	52	69	57	26
31	.08	---	4.6	2.8	---	7.6	---	53	---	69	57	---
TOTAL	91.10	3.52	69.83	416.1	171.3	321.6	432	880	2039	1634	2009	950
MEAN	2.94	.12	2.25	13.4	6.12	10.4	14.4	28.4	68.0	52.7	64.8	31.7
MAX	8.3	.83	18	69	17	34	28	53	75	74	77	54
MIN	.08	.06	.08	2.3	2.0	3.8	11	11	52	18	55	20
AC-FT	181	7.0	139	825	340	638	857	1750	4040	3240	3980	1880
(†)	44	0	0	0	0	39	95	2,550	4,420	4,360	3,960	2,610
(‡)	0	a2,040	a5,010	a18,680	a25,860	a43,740	a58,880	a59,590	a50,330	41,610	32,320	a27,310

CAL YR 1977 TOTAL 4227.92 MEAN 11.6 MAX 84 MIN .06 AC-FT 8390 AC-FT† 12,070
WTR YR 1978 TOTAL 9017.45 MEAN 24.7 MAX 77 MIN .06 AC-FT 17890 AC-FT† 18,070

† Diversion, in acre-feet, North Drews Canal.
‡ Monthend contents in acre-feet, of Drews Reservoir.
a Contents interpolated.

11340500 COTTONWOOD CREEK NEAR LAKEVIEW, OR

LOCATION.--Lat 42°14'05", long 120°30'05", in N½ sec.32, T.38 S., R.19 E., Lake County, Hydrologic Unit 18020001, on right bank 0.7 mi (1.1 km) downstream from Cottonwood Dam and 9 mi (14 km) northwest of Lakeview.

DRAINAGE AREA.--32.9 mi² (85.2 km²).

PERIOD OF RECORD.--November 1908 to September 1919, May 1924 to November 1935, March to December 1936, April to December 1937, April 1938 to November 1942, March to November 1943, March to October 1944, February to November 1945, March 1946 to current year. Monthly discharge only May 1924 to September 1925, published in WSP 1315-A.

REVISED RECORDS.--WSP 1565: 1910-11, 1919, 1929, 1937(M). WSP 1931: Drainage area (former site).

GAGE.--Water-stage recorder. Datum of gage is 4,949.37 ft (1,508.568 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to June 1, 1919, and May 1, 1924, to June 3, 1932, nonrecording gage at several sites within 0.6 mi (1.0 km) upstream at different datums. June 1 to Sept. 30, 1919, and June 4, 1932, to Sept. 14, 1961, water-stage recorder at site 0.6 mi (1.0 km) upstream at different datums.

REMARKS.--Records good except those for November to January, which are fair. Flow regulated since 1923 by Cottonwood Reservoir, capacity, 7,540 acre-ft (9.30 hm³). Since October 1961, 240 acre-ft (295,900 m³) unregulated storage in Cottonwood Meadows, 9 mi (14 km) upstream. Diversions for irrigation above station.

AVERAGE DISCHARGE.--57 years (water years 1910-19, 1925-35, 1939-42, 1947-78), 21.4 ft³/s (0.606 m³/s), 15,500 acr-ft/yr (19.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, between 500 and 1,000 ft³/s (14.2 and 28 3 m³/s) during period Apr. 26 to May 1, 1927, when natural flow, estimated as 170 ft³/s (4.81 m³/s), was augmented by water escaping from reservoir through break in outlet conduit near control gates; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 77 ft³/s (2.18 m³/s) June 12, 13; maximum gage height, 1.97 ft (0.600 m) June 7-13; minimum discharge, 0.08 ft³/s (0.002 m³/s) Oct. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.20	1.2	2.2	2.5	4.4	3.6	58	37	28	54	7.0
2	.16	.18	1.4	2.2	2.5	4.4	4.4	51	39	29	54	6.0
3	.15	.20	1.6	2.2	3.4	5.4	4.1	54	41	29	54	6.0
4	.15	.22	1.4	2.0	3.6	6.7	3.8	54	41	29	54	6.0
5	.13	.20	1.4	2.2	4.1	8.4	3.6	54	48	16	51	6.0
6	.15	.20	1.5	2.2	4.8	7.5	3.8	48	58	3.8	51	6.4
7	.16	.18	1.5	2.2	4.8	6.7	3.8	48	70	3.6	51	6.4
8	.15	.20	1.4	2.2	4.4	6.0	3.8	48	70	3.6	51	10
9	.13	.25	1.4	3.4	4.1	6.0	3.4	48	74	3.6	51	13
10	.13	.51	1.3	3.4	3.8	5.4	3.8	54	74	3.6	51	13
11	.13	.51	1.2	2.9	3.8	5.1	13	58	74	3.6	51	13
12	.11	.51	1.2	2.9	3.6	5.1	28	54	77	8.2	48	11
13	.11	.51	1.2	3.8	3.6	4.8	34	51	74	16	48	7.9
14	.11	.51	1.5	6.0	3.6	4.4	43	54	70	16	46	7.9
15	.11	.51	3.0	7.0	3.6	4.4	44	61	70	16	41	4.0
16	.10	.56	2.5	4.8	3.6	4.8	46	64	70	16	39	.66
17	.10	.56	2.3	4.8	3.6	4.4	43	58	70	18	39	.56
18	.10	.56	2.3	4.1	3.6	4.1	39	51	74	19	39	.51
19	.10	.56	2.3	4.4	3.8	3.8	37	48	67	27	39	.51
20	.11	.56	2.4	4.4	4.4	3.8	37	48	58	32	37	.51
21	.13	.56	2.5	4.4	4.8	3.8	35	46	51	30	34	.51
22	.16	2.4	2.7	4.1	4.8	3.6	32	44	51	43	32	.33
23	.16	3.4	2.5	3.8	5.1	3.6	28	44	51	58	32	.20
24	.18	3.3	2.5	3.6	5.1	3.6	27	44	51	54	32	.20
25	.20	3.4	2.7	3.6	5.1	3.6	30	46	54	48	24	.20
26	.18	3.8	2.5	3.4	5.1	3.4	37	46	54	54	16	.20
27	.18	3.8	2.5	3.4	4.8	3.3	43	43	54	61	13	.20
28	.95	2.0	2.2	3.3	4.8	3.3	46	41	58	61	11	.20
29	1.6	1.3	2.4	3.3	---	3.3	51	37	51	58	9.8	.20
30	1.8	1.3	2.4	3.3	---	3.1	58	39	37	54	9.8	.20
31	1.4	---	2.4	2.9	---	3.1	---	39	---	54	9.8	---
TOTAL	9.49	32.95	61.3	108.4	114.8	143.3	789.1	1533	1768	896.0	1172.4	128.79
MEAN	.31	1.10	1.98	3.50	4.10	4.62	26.3	49.5	58.9	28.9	37.8	4.29
MAX	1.8	3.8	3.0	7.0	5.1	8.4	58	64	77	61	54	13
MIN	.10	.18	1.2	2.0	2.5	3.1	3.4	37	37	3.6	9.8	.20
AC-FT	19	65	122	215	228	284	1570	3040	3510	1780	2330	255
(†)	a135	a276	a1,870	a3,050	a4,220	a7,490	a8,800	a8,880	a6,820	5,190	a2,850	a2,740

CAL YR 1977 TOTAL 1354.28 MEAN 3.71 MAX 46 MIN .00 AC-FT 2690
WTR YR 1978 TOTAL 6757.53 MEAN 18.5 MAX 77 MIN .10 AC-FT 13400

† Month-end contents, in acre-feet, of Cottonwood Reservoir.
a Contents interpolated.

11492200 CRATER LAKE NEAR CRATER LAKE, OR
(Hydrologic bench-mark station)

LOCATION.--Lat 42°58'45", long 122°04'45", (unsurveyed) Crater Lake National Park and Vicinity Quadrangle, Klamath County, Hydrologic Unit 18010201, at boat harbor at end of trail in Cleetwood Cove and 6 mi (10 km) northeast of Crater Lake post office.

DRAINAGE AREA.--26.2 mi^2 (67.9 km^2), of which 20.5 mi^2 (53.1 km^2) is lake area at elevation 6,176 ft (1,882.4 m).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year. 1878 to September 1961 (fragmentary records) available in files of Portland district office.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to September 1961, nonrecording gage and various reference points used near old boat landing at abandoned trail (Eagle Cove) directly across Lake.

REMARKS.--Crater Lake occupies the caldera of prehistoric Mount Mazama. It has no visible inlet or outlet. Over a period of years precipitation and runoff from snow melt on the walls of the crater are offset by seepage and evaporation. Records of accumulated annual precipitation, collected at the north rim of Crater Lake as part of the operation of this station, are published annually in reports of the National Weather Service.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 6,179.34 ft (1,883.463 m) Mar. 25, 1975; minimum observed, 6,163.2 ft (1,878.54 m) Sept. 10, 1942.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 6,180.5 ft (1,883.82 m), average of several observations of line of crustose lichens made between 1916 and 1960; that stage may have occurred near the close of the 19th century. The occurrence of living pine trees slightly higher suggests that the lake has not been materially higher for several centuries.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 6,175.92 ft (1,882.420 m) sometime between Dec. 2 and June 12; minimum, 6,173.41 ft (1,881.655 m) Nov. 20.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6173.86	6173.64	6174.39						---	6175.33	6175.08	6174.57
2	6173.83	6173.63	---						---	6175.34	6175.07	6174.55
3	6173.81	6173.61	---						---	6175.33	6175.06	6174.54
4	6173.80	6173.64	---						---	6175.32	6175.05	6174.58
5	6173.79	6173.64	---						---	6175.32	6175.04	6174.58
6	6173.77	6173.63	---						---	6175.31	6175.02	6174.58
7	6173.73	6173.59	---						---	6175.38	6175.00	6174.57
8	6173.72	6173.58	---						---	6175.38	6174.99	6174.56
9	6173.70	6173.55	---						---	6175.36	6174.97	6174.70
10	6173.68	6173.52	---						---	6175.34	6174.95	6174.75
11	6173.68	6173.52	---						---	6175.34	6174.92	6174.74
12	6173.67	6173.50	---						---	6175.33	6174.88	6174.72
13	6173.65	6173.50	---						6175.43	6175.32	6174.86	6174.72
14	6173.64	6173.52	---						6175.42	6175.31	6174.83	6174.70
15	6173.63	6173.52	---						6175.40	6175.30	6174.86	6174.68
16	6173.61	6173.50	---						6175.40	6175.29	6174.83	6174.67
17	6173.61	6173.47	---						6175.39	6175.27	6174.81	6174.66
18	6173.58	6173.46	---						6175.40	6175.27	6174.80	6174.64
19	6173.56	6173.45	---						6175.40	6175.25	6174.77	6174.63
20	6173.54	6173.41	---						6175.39	6175.23	6174.74	6174.61
21	6173.52	6173.70	---						6175.38	6175.21	6174.75	6174.58
22	6173.50	6173.80	---						6175.38	6175.21	6174.73	6174.56
23	6173.48	6173.89	---						6175.38	6175.20	6174.72	6174.55
24	6173.52	6174.18	---						6175.38	6175.20	6174.71	6174.54
25	6173.61	6174.39	---						6175.36	6175.18	6174.68	6174.52
26	6173.59	6174.38	---						6175.36	6175.16	6174.67	6174.49
27	6173.56	6174.40	---						6175.33	6175.15	6174.65	6174.48
28	6173.57	6174.40	---						6175.33	6175.13	6174.65	6174.46
29	6173.61	6174.41	---						6175.33	6175.13	6174.63	6174.45
30	6173.61	6174.40	---						6175.32	6175.11	6174.63	6174.43
31	6173.63	---	---						---	6175.09	6174.61	---
MEAN	6173.65	6173.76	---						---	6175.26	6174.84	6174.59
MAX	6173.86	6174.41	---						---	6175.38	6175.08	6174.75
MIN	6173.48	6173.41	---						---	6175.09	6174.61	6174.43

NOTE.--No gage-height record Dec. 2 to June 12.

11492200 CRATER LAKE NEAR CRATER LAKE, OR--Continued
(Hydrologic bench-mark station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.
WATER TEMPERATURES: October 1963 to current year.

GAGE.--Stevens thermograph. Elevation of probe is 6,157 ft (1,876.7 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Recorder stopped Dec. 2 to June 13 (range in temperature, 4.0 to 8.0°C).

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 18.5°C Aug. 9, 10, 1978; minimum, 0.5°C on several days in 1969.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 18.5°C Aug. 9, 10; minimum, 4.0°C during period Dec. 2 to June 13.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER-ATURE (DEG C)	PH (UNITS)	SPF-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)
OCT 11...	1200	--	--	113	18	7.9	3.1	11	1.8	29
JUN 13...	1400	6.0	7.2	120	14	6.7	2.6	11	1.8	30
AUG 09...	1100	17.5	7.5	124	18	6.9	2.6	10	1.8	27

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT 11...	10	9.9	.1	.01	.02	33	4	81	79
JUN 13...	13	11	.1	.02	.00	27	0	69	78
AUG 09...	10	9.9	.1	.01	.02	28	1	76	76

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTORER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	11.0	9.0	9.0	5.5	5.5						
2	11.0	11.0	9.0	9.0	---	---						
3	11.0	11.0	9.0	8.5	---	---						
4	11.0	10.5	8.5	8.5	---	---						
5	10.5	10.5	8.5	8.5	---	---						
6	10.5	10.5	8.5	8.0	---	---						
7	10.5	10.5	8.0	8.0	---	---						
8	10.5	10.5	8.0	8.0	---	---						
9	10.5	10.5	8.0	8.0	---	---						
10	10.5	10.5	8.0	8.0	---	---						
11	10.5	10.5	8.0	8.0	---	---						
12	10.5	10.5	8.0	8.0	---	---						
13	10.5	10.5	8.0	8.0	---	---						
14	10.5	10.5	8.0	7.0	---	---						
15	10.5	10.5	7.0	7.0	---	---						
16	10.5	10.5	7.0	7.0	---	---						
17	10.5	10.5	7.0	7.0	---	---						
18	10.5	10.5	7.0	7.0	---	---						
19	10.5	10.5	7.0	6.5	---	---						
20	10.5	10.5	6.5	6.5	---	---						
21	10.5	10.5	6.5	6.0	---	---						
22	10.5	10.5	6.0	6.0	---	---						
23	10.5	10.5	6.0	6.0	---	---						
24	10.5	10.5	6.0	6.0	---	---						
25	10.5	10.0	6.0	5.5	---	---						
26	10.0	10.0	5.5	5.5	---	---						
27	10.0	10.0	5.5	5.5	---	---						
28	10.0	10.0	5.5	5.5	---	---						
29	10.0	9.5	5.5	5.5	---	---						
30	9.5	9.0	5.5	5.5	---	---						
31	9.0	9.0	---	---	---	---						
MONTH	11.0	9.0	9.0	5.5	5.5	5.5						

11492200 CRATER LAKE NEAR CRATER LAKE, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1					---	---	8.5	8.0	15.0	15.0	14.0	14.0
2					---	---	8.5	8.5	15.0	15.0	14.0	14.0
3					---	---	8.5	8.5	15.5	15.0	14.0	14.0
4					---	---	8.5	8.5	15.5	15.5	14.0	14.0
5					---	---	8.5	8.5	16.0	15.5	14.0	14.0
6					---	---	8.5	8.5	16.5	16.0	14.0	14.0
7					---	---	8.5	8.5	17.0	16.5	14.0	13.5
8					---	---	8.5	8.5	18.0	17.0	13.5	13.5
9					---	---	8.5	8.5	18.5	16.5	13.5	12.0
10					---	---	10.0	8.5	18.5	16.0	12.0	12.0
11					---	---	10.0	10.0	18.0	17.0	12.0	12.0
12					---	---	10.5	10.5	18.0	17.0	12.0	11.5
13					6.0	6.0	10.5	10.5	17.0	16.5	11.5	11.5
14					6.0	6.0	10.5	10.5	16.5	16.0	11.5	11.5
15					6.0	6.0	12.0	10.5	16.0	16.0	11.5	11.5
16					6.0	6.0	12.0	12.0	16.0	15.5	11.5	11.5
17					6.0	6.0	12.0	11.0	15.5	15.5	11.5	11.5
18					6.0	6.0	11.0	11.0	15.5	15.5	11.5	11.5
19					6.5	6.0	11.5	11.0	15.5	15.5	11.5	11.5
20					6.5	6.5	12.0	11.5	15.5	15.5	11.5	11.5
21					6.5	6.5	12.0	12.0	15.5	15.5	11.5	11.0
22					8.0	6.5	12.0	12.0	15.5	15.0	11.0	11.0
23					8.5	8.5	12.0	12.0	15.0	14.5	11.0	11.0
24					8.5	8.5	14.0	12.0	14.5	14.5	11.0	11.0
25					8.5	8.5	14.0	14.0	14.5	14.0	11.0	11.0
26					8.5	8.5	14.5	14.0	14.0	14.0	11.0	11.0
27					8.5	8.5	14.5	14.5	14.0	14.0	11.0	11.0
28					8.5	7.0	14.5	14.5	14.0	14.0	11.0	11.0
29					7.0	7.0	14.5	14.5	14.0	14.0	11.0	11.0
30					8.0	7.0	14.5	14.5	14.0	14.0	11.0	11.0
31					---	---	15.0	14.5	14.0	14.0	---	---
MONTH					8.5	6.0	15.0	8.0	18.5	14.0	14.0	11.0

11493500 WILLAMSON RIVER NEAR KLAMATH AGENCY, OR

LOCATION.--Lat 42°44'25", long 121°50'00", in NW¼SW¼ sec.1, T.33 S., R.7 E., Klamath County, Hydrologic Unit 18010201, on right bank 250 ft (76 m) downstream from highway bridge, 0.6 mi (1.0 km) southwest of railroad station at Kirk, 10 mi (16 km) upstream from Spring Creek, and 10 mi (16 km) northeast of Klamath Agency.

DRAINAGE AREA.--1,290 mi^2 (3,340 km^2), approximately.

PERIOD OF RECORD.--March 1908 to January 1909, April 1909 to June 1910, October 1954 to current year. Monthly discharge only June 1910, published in WSP 1315-B.

REVISED RECORDS.--WSP 1565: 1908-9.

GAGE.--Water-stage recorder. Datum of gage is 4,483.16 ft (1,366.467 m) National Geodetic Vertical Datum of 1929. Mar. 25, 1908, to June 30, 1910, nonrecording gage or water-stage recorder at two sites about 0.5 mi (0.8 km) upstream at different datums. Oct. 1, 1954, to Sept. 30, 1955, water-stage recorder at present site at datum 2.05 ft (0.625 m) higher.

REMARKS.--Records good above 50 ft^3/s (1.42 m^3/s) and fair below. Flow affected by natural storage in Klamath Marsh. Small diversions above station for irrigation in vicinity of marsh.

AVERAGE DISCHARGE.--24 years (water years 1955-78), 213 ft^3/s (6.032 m^3/s), 154,300 acre-ft/yr (190 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 1,590 ft^3/s (45.0 m^3/s) Mar. 13, 1910, gage height, 3.7 ft (1.13 m), site and datum then in use, from rating curve extended above 800 ft^3/s (22.7 m^3/s); maximum gage height, 5.75 ft (1.753 m) Mar. 3, 1958; no flow at times during 1960-74, 1977, and 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 601 ft^3/s (17.0 m^3/s) Jan. 17, gage height, 4.93 ft (1.503 m) from floodmarks; no flow Oct. 1-25, Aug. 7 to Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	16	218	410	420	436	336	258	132	27	.48	.00
2	.00	22	228	410	420	436	319	251	130	26	.24	.00
3	.00	27	244	400	430	430	315	248	126	25	.14	.00
4	.00	31	255	400	440	430	311	241	121	24	.04	.00
5	[illegible]	37	269	410	450	430	307	241	115	22	.02	.00
6	.00	44	269	420	450	424	331	241	105	21	.01	.00
7	.00	50	265	430	460	424	340	231	98	19	.00	.00
8	.00	54	284	440	470	466	340	225	91	19	.00	.00
9	.00	58	307	440	490	497	336	218	82	17	.00	.00
10	.00	65	311	440	510	491	319	212	79	16	.00	.00
11	.00	65	323	450	491	484	315	203	78	16	.00	.00
12	.00	70	340	450	491	478	311	197	72	14	.00	.00
13	.00	73	340	441	478	447	295	189	69	13	.00	.00
14	.00	78	350	441	466	447	280	186	65	13	.00	.00
15	.00	76	380	447	466	447	276	189	65	8.5	.00	.00
16	.00	82	420	459	459	441	269	194	61	7.2	.00	.00
17	.00	105	450	500	447	436	272	192	56	6.0	.00	.00
18	.00	86	440	490	441	436	276	192	51	5.3	.00	.00
19	.00	84	430	480	441	424	272	189	51	4.9	.00	.00
20	.00	89	420	480	441	424	272	183	47	4.7	.00	.00
21	.00	98	420	470	441	418	265	175	41	3.5	.00	.00
22	.00	94	410	470	441	402	262	173	39	3.5	.00	.00
23	.00	110	420	460	441	386	265	167	38	3.0	.00	.00
24	.00	125	420	450	441	380	262	157	36	3.0	.00	.00
25	.00	140	420	450	441	386	262	157	40	2.4	.00	.00
26	.09	150	420	450	441	386	262	152	40	3.5	.00	.00
27	.96	160	410	440	436	380	265	147	35	3.5	.00	.00
28	2.7	175	410	440	430	370	265	144	30	1.8	.00	.00
29	4.8	185	410	440	---	360	262	142	29	1.1	.00	.00
30	7.9	200	410	440	---	355	258	139	29	.92	.00	.00
31	12	---	410	430	---	350	---	135	---	.74	.00	---
TOTAL	28.45	2649	11103	13778	12673	13101	8720	5968	2051	335.56	.93	.00
MEAN	.92	88.3	358	444	453	423	291	193	68.4	10.8	.030	.000
MAX	12	200	450	500	510	497	340	258	132	27	.48	.00
MIN	.00	16	218	400	420	350	258	135	29	.74	.00	.00
AC-FT	56	5250	22020	27330	25140	25990	17300	11840	4070	666	1.8	.00

CAL YR 1977 TOTAL 43650.49 MEAN 120 MAX 450 MIN .00 AC-FT 86580
WTR YR 1978 TOTAL 70407.94 MEAN 193 MAX 510 MIN .00 AC-FT 139700

NOTE.--No gage-height record Jan. 17 to Feb. 8.

11497500 SPRAGUE RIVER NEAR BEATTY, OR

LOCATION.--Lat 42°26'50", long 121°14'15", in NW¼SE¼ sec.13, T.36 S., R.12 E., Klamath County, Hydrologic Unit 18010202, on right bank 1.6 mi (2.6 km) east of Beatty, and 4.6 mi (7.4 km) upstream from Sycan River.

DRAINAGE AREA.--513 mi^2 (1,329 km^2).

PERIOD OF RECORD.--April to September 1912 and November 1912 to September 1913 (fragmentary), October 1913 to September 1915, February to November 1916, March 1917 to June 1918, May 1919 to October 1920, February 1921 to September 1926 (irrigation seasons only), October 1953 to current year. Monthly discharge only October 1913, published in WSP 1315-B. Prior to October 1917, published as "near Yainax."

REVISED RECORDS.--WSP 1315-B: 1917(M).

GAGE.--Water-stage recorder. Datum of gage is 4,305.35 ft (1,312.271 m) National Geodetic Vertical Datum of 1929. Apr. 19, 1912, to Feb. 19, 1914, nonrecording gage, Feb. 20, 1914, to Sept. 11, 1917, water-stage recorder, and Sept. 12, 1917, to Sept. 30, 1926, nonrecording gage, at site 2 mi (3 km) upstream at different datum.

REMARKS.--Records good. No regulation. Diversions for irrigation above station in the vicinity of Bly.

AVERAGE DISCHARGE.--28 years (water years 1914-15, 1920, 1954-78), 311 ft^3/s (8.808 m^3/s), 225,300 acre-ft/yr (278 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,980 ft^3/s (198 m^3/s) Dec. 23, 1964, gage height, 12.19 ft (3.716 m); minimum, 56 ft^3/s (1.59 m^3/s) Aug. 11, 17, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,480 ft^3/s (41.9 m^3/s) Apr. 7; maximum gage height, 7.05 ft (2.149 m) Dec. 15; minimum discharge, 68 ft^3/s (1.93 m^3/s) Nov. 20, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	120	204	190	196	265	1030	899	370	280	139	114
2	139	119	181	190	189	275	1390	902	351	264	138	116
3	133	121	182	200	226	329	1200	870	356	273	135	120
4	134	119	217	230	319	400	1210	860	351	282	134	119
5	122	122	196	280	274	591	1070	818	360	279	123	117
6	121	121	176	350	341	696	968	767	365	270	119	122
7	122	120	178	460	421	503	1310	740	370	264	116	121
8	122	117	161	600	576	516	1200	749	363	255	118	120
9	125	112	139	760	377	1080	895	770	368	270	117	122
10	121	115	154	941	311	903	807	836	368	265	114	149
11	117	119	153	714	251	643	801	842	388	263	110	173
12	117	120	155	525	233	560	784	779	365	249	104	168
13	118	121	164	472	257	505	759	743	348	244	105	168
14	119	121	397	709	236	444	743	773	336	230	99	188
15	117	123	1290	912	236	406	727	848	322	218	102	194
16	116	121	1010	879	207	393	734	996	288	218	105	166
17	116	119	397	651	212	391	748	895	274	217	108	161
18	116	111	280	482	222	405	697	791	272	204	114	148
19	116	98	248	446	244	421	651	731	310	208	110	150
20	116	90	148	404	276	443	651	716	291	206	106	144
21	113	103	240	345	285	486	776	662	275	204	100	142
22	113	117	230	314	277	542	696	680	261	198	100	145
23	117	125	260	252	275	615	604	656	261	188	108	156
24	117	140	240	200	284	729	575	632	271	186	107	155
25	120	190	220	227	297	651	588	617	317	179	96	141
26	130	385	220	255	297	606	708	587	297	178	91	143
27	129	554	230	226	290	615	958	520	283	175	90	140
28	123	372	240	219	272	639	899	484	286	165	92	140
29	121	246	270	220	---	690	821	456	306	156	92	139
30	123	241	230	212	---	744	823	422	296	151	101	137
31	121	---	200	206	---	841	---	388	---	146	119	---
TOTAL	3791	4802	8610	13071	7881	17327	25823	22429	9669	6887	3412	4318
MEAN	122	160	278	422	281	559	861	724	322	222	110	144
MAX	157	554	1290	941	576	1080	1390	996	388	282	139	194
MIN	113	90	139	190	189	265	575	388	261	146	90	114
AC-FT	7520	9520	17080	25930	15630	34370	51220	44490	19180	13660	6770	8560

CAL YR 1977 TOTAL 52081 MEAN 143 MAX 1290 MIN 57 AC-FT 103300
WTR YR 1978 TOTAL 128020 MEAN 351 MAX 1390 MIN 90 AC-FT 253900

11501000 SPRAGUE RIVER NEAR CHILOQUIN, OR

LOCATION.--Lat 42°35'05", long 121°50'55", in NE¼NW¼ sec.35, T.34 S., R.7 E., Klamath County, Hydrologic Unit 18010202, on right bank 1.0 mi (1.6 km) northeast of Chiloquin, 4.6 mi (7.4 km) upstream from Modoc Point Canal intake, and at mile 5.4 (8.7 km).

DRAINAGE AREA.--1,580 mi^2 (4,090 km^2), approximately.

PERIOD OF RECORD.--July to October 1920, March 1921 to current year. Monthly discharge only July 1920, published in WSP 1315-B. Prior to October 1931, published as "at McCready Ranch, near Chiloquin."

REVISED RECORDS.--WSP 591: 1922(M). WSP 1011: 1943(M). WSP 1565: 1921-22.

GAGE.--Water-stage recorder. Datum of gage is 4,202.43 ft (1,280.901 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1931, nonrecording gage at site 12 mi (19 km) upstream at different datum.

REMARKS.--Records good. Regulation by ponding at irrigation dams. Diversions above station for irrigation.

AVERAGE DISCHARGE.--57 years (water years 1922-78), 575 ft^3/s (16.28 m^3/s), 416,600 acre-ft/yr (514 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,900 ft^3/s (422 m^3/s) Dec. 26, 1964, gage height, 10.37 ft (3.161 m); minimum daily, 50 ft^3/s (1.42 m^3/s) May 26, 27, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,550 ft^3/s (72.2 m^3/s) Apr. 10, gage height, 4.52 ft (1.378 m); minimum, 100 ft^3/s (2.83 m^3/s) Nov. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	310	283	562	693	545	820	1360	1400	841	481	201	218
2	358	283	521	649	533	773	1470	1400	780	487	193	222
3	343	278	504	533	580	740	1670	1390	733	476	189	226
4	306	278	470	504	593	740	1990	1410	687	444	186	230
5	283	278	476	587	649	814	2350	1410	661	413	186	234
6	274	283	481	668	841	939	2480	1390	636	407	186	247
7	265	283	459	760	975	1090	2460	1380	605	402	182	247
8	243	283	418	869	1140	1310	2380	1350	593	387	186	238
9	260	278	413	834	1310	1490	2360	1300	568	373	189	247
10	260	278	387	882	1370	1550	2400	1270	551	373	189	256
11	260	274	373	1140	1210	1840	2500	1250	556	363	186	260
12	265	269	392	1430	997	2150	2300	1270	556	353	182	269
13	265	274	413	1590	807	2080	2100	1300	556	343	186	283
14	265	278	476	1580	700	1760	1800	1330	551	320	178	310
15	265	278	649	1570	681	1450	1600	1340	533	310	174	306
16	260	278	869	1710	636	1270	1500	1300	539	306	170	306
17	260	278	1220	2010	611	1120	1480	1280	533	306	174	310
18	251	278	1600	2280	568	1030	1450	1350	527	296	178	306
19	269	278	1500	2220	574	990	1450	1430	510	292	186	292
20	269	256	880	1920	605	968	1420	1460	504	287	197	283
21	269	174	720	1590	611	961	1370	1410	498	265	213	274
22	265	256	570	1330	649	961	1350	1320	498	251	222	274
23	269	287	746	1130	687	1000	1350	1230	487	247	222	274
24	269	433	766	968	753	1080	1350	1170	476	251	222	269
25	278	407	720	814	834	1190	1320	1130	476	243	222	274
26	283	413	766	687	882	1390	1280	1120	476	243	218	278
27	283	438	746	649	896	1500	1250	1100	492	234	226	278
28	278	551	623	642	869	1440	1250	1080	515	226	226	269
29	283	681	574	599	---	1350	1300	1030	504	222	222	256
30	287	681	587	568	---	1290	1350	968	498	218	218	251
31	278	---	617	562	---	1300	---	904	---	213	213	---
TOTAL	8573	9867	20498	33968	22106	38386	51690	39472	16940	10032	6122	7987
MEAN	277	329	661	1096	790	1238	1723	1273	565	324	197	266
MAX	358	681	1600	2280	1370	2150	2500	1460	841	487	226	310
MIN	243	174	373	504	533	740	1250	904	476	213	170	218
AC-FT	17000	19570	40660	67380	43850	76140	102500	78290	33600	19900	12140	15840

CAL YR 1977 TOTAL 107256 MEAN 294 MAX 1600 MIN 120 AC-FT 212700
WTR YR 1978 TOTAL 265641 MEAN 728 MAX 2500 MIN 170 AC-FT 526900

11502500 WILLIAMSON RIVER BELOW SPRAGUE RIVER, NEAR CHILOQUIN, OR

LOCATION.--Lat 42°34'15", long 121°52'35", in NE¼NE¼ sec.4, T.35 S., R.7 E., Klamath County, Hydrologic Unit 18010202, on right bank 0.2 mi (0.3 km) downstream from Sprague River and 0.8 mi (1.3 km) southwest of Chiloquin.

DRAINAGE AREA.--3,000 mi^2 (7,770 km^2), approximately.

PERIOD OF RECORD.--June 1917 to current year.

REVISED RECORDS.--WSP 981: 1938(M). WSP 1565: 1920(M), 1927(M), 1938.

GAGE.--Water-stage recorder. Datum of gage is 4,155.55 ft (1,266.612 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 1, 1923, at different datum.

REMARKS.--Records good. Some regulation by diversion dams and logpond operations on Sprague River. Diversions for irrigation above station.

AVERAGE DISCHARGE.--61 years, 1,042 ft^3/s (29.51 m^3/s), 754,900 acre-ft/yr (931 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft^3/s (456 m^3/s) Dec. 26, 1964, gage height, 10.56 ft (3.219 m); minimum, 320 ft^3/s (9.06 m^3/s) Oct. 14, 1920.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,160 ft^3/s (89.5 m^3/s) Jan. 18, Apr. 10, 11, gage height, 4.78 ft (1.457 m); minimum, 466 ft^3/s (13.2 m^3/s) Aug. 14-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	676	646	1190	1450	1290	1550	2000	1980	1220	737	488	517
2	733	653	1160	1410	1280	1490	2100	1940	1150	737	482	523
3	717	653	1170	1290	1370	1460	2260	1940	1100	730	482	523
4	676	660	1130	1250	1380	1460	2570	1940	1060	706	477	530
5	646	668	1130	1330	1420	1540	2950	1940	1030	667	471	536
6	646	668	1170	1420	1600	1650	3110	1930	994	652	477	554
7	638	676	1140	1500	1770	1800	3110	1910	960	652	471	548
8	624	684	1090	1630	1940	2110	3020	1870	952	644	477	536
9	624	684	1110	1600	2130	2310	3010	1830	919	630	477	548
10	624	684	1090	1630	2190	2350	3100	1780	902	622	477	561
11	624	692	1100	1870	2040	2640	3130	1740	894	608	477	567
12	624	692	1130	2170	1790	2980	2890	1740	894	601	477	574
13	624	700	1180	2370	1590	2880	2600	1780	886	594	477	587
14	624	717	1150	2370	1470	2510	2370	1800	878	574	471	608
15	624	733	1200	2370	1440	2190	2220	1820	855	574	471	608
16	631	733	1300	2510	1380	2010	2140	1760	855	561	466	608
17	631	742	1500	2830	1340	1850	2090	1730	839	561	471	615
18	631	742	2000	3100	1300	1760	2040	1780	824	561	477	615
19	624	742	2100	3070	1310	1700	2040	1880	809	554	482	601
20	631	742	1800	2790	1340	1670	2010	1920	780	554	488	587
21	617	668	1550	2440	1340	1670	1940	1840	765	536	506	580
22	617	708	1410	2170	1370	1660	1890	1740	758	530	517	580
23	624	708	1530	1960	1410	1700	1890	1650	744	523	517	580
24	624	882	1560	1770	1480	1740	1930	1580	737	530	517	580
25	638	937	1510	1600	1570	1850	1880	1550	730	523	523	580
26	638	956	1560	1470	1620	2050	1790	1530	730	530	517	580
27	638	984	1570	1430	1630	2180	1730	1490	737	517	523	580
28	646	1100	1440	1420	1590	2110	1730	1460	744	506	523	574
29	646	1210	1380	1370	---	2010	1820	1420	737	500	517	561
30	653	1220	1390	1330	---	1960	1930	1340	737	500	517	554
31	638	---	1410	1320	---	1960	---	1280	---	500	517	---
TOTAL	19851	23284	42150	58240	43380	60800	69290	53890	26220	18214	15230	17095
MEAN	640	776	1360	1879	1549	1961	2310	1738	874	588	491	570
MAX	733	1220	2100	3100	2190	2980	3130	1980	1220	737	523	615
MIN	617	646	1090	1250	1280	1460	1730	1280	730	500	466	517
AC-FT	39370	46180	83600	115500	86040	120600	137400	106900	52010	36130	30210	33910

CAL YR 1977 TOTAL 276256 MEAN 757 MAX 2100 MIN 475 AC-FT 548000
WTR YR 1978 TOTAL 447644 MEAN 1226 MAX 3130 MIN 466 AC-FT 887900

11503000 ANNIE SPRING NEAR CRATER LAKE, OR

LOCATION.--Lat 42°52'20", long 122°10'00", unsurveyed, Klamath County, Hydrologic Unit 18010203, in Crater Lake National Park, at highway bridge 0.1 mi (0.16 km) downstream from source.

DRAINAGE AREA.--Indeterminate, normal flow is entirely from Annie Spring.

PERIOD OF RECORD.--June 1977 to current year. Discharge measurement and fragmentary gage-height record August to October 1913. Discharge measurements only Oct. 11, 1967, June 26, Sept. 13, 1968.

GAGE.--Water-stage recorder. Altitude of gage is 6,050 ft (1,844 m), from topographic map.

REMARKS.--Records good. Slight regulation by pumps 0.1 mi (0.16 km) upstream. Diversion for domestic use by National Park Service 0.1 mi (0.16 km) upstream.

COOPERATION.--Records of diversion by pumping furnished by National Park Service.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9.0 ft^3/s (0.25 m^3/s) June 12, 1978, gage height, 1.41 ft (0.430 m); minimum, 0.33 ft^3/s (0.009 m^3/s) Nov. 20, 22, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9.0 ft^3/s (0.25 m^3/s) June 12, gage height, 1.41 ft (0.430 m); minimum, 0.33 ft^3/s (0.009 m^3/s) Nov. 20, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									.88	1.3	.70	.56
2									.91	1.3	.74	.56
3									1.0	1.2	.77	.51
4									1.1	1.2	.67	.49
5									1.2	1.2	.70	.54
6									1.2	1.1	.70	.56
7									1.7	1.1	.70	.54
8									2.0	1.1	.70	.51
9									2.2	1.1	.70	.54
10									2.2	1.0	.70	.51
11									2.3	.99	.67	.54
12									2.4	.99	.67	.54
13									2.3	.95	.64	.54
14									2.3	.95	.67	.51
15									2.2	.95	.64	.51
16									2.2	.95	.67	.54
17									2.2	.91	.64	.54
18									2.1	.88	.64	.54
19									2.0	.88	.64	.56
20									1.9	.88	.62	.54
21									1.9	.88	.64	.54
22									1.9	.84	.59	.51
23									1.7	.80	.62	.56
24									1.7	.84	.62	.51
25									1.7	.77	.59	.51
26									1.6	.77	.62	.51
27									1.5	.77	.62	.51
28									1.4	.77	.56	.54
29									1.4	.70	.62	.51
30									1.3	.74	.59	.51
31									---	.70	.59	---
TOTAL									52.39	29.51	20.24	15.89
MEAN									1.75	.95	.65	.53
MAX									2.4	1.3	.77	.56
MIN									.88	.70	.56	.49
AC-FT									104	59	40	32
MEAN†									1.86	1.14	.77	.62
AC-FT†									111	70	47	.37

† Adjusted for diversion by pumpage.

11503000 ANNIE SPRING NEAR CRATER LAKE, OR--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.56	.39	1.7	3.6	2.1	1.5	2.1	2.1	5.1	7.6	4.3	3.1
2	.51	.39	1.7	3.5	2.1	1.5	2.2	2.1	5.2	7.6	4.3	3.1
3	.51	.39	1.9	3.4	2.2	1.5	2.3	2.1	5.2	7.5	4.1	3.0
4	.51	.39	1.9	3.4	2.2	1.5	2.5	2.2	5.7	7.3	4.1	2.9
5	.51	.41	2.1	3.4	2.1	1.5	2.5	2.2	6.3	7.3	4.0	3.0
6	.51	.41	2.1	3.4	2.0	1.4	2.5	2.3	6.6	7.2	4.0	2.9
7	.51	.39	2.3	3.2	1.8	1.5	2.5	2.3	7.2	7.2	3.9	3.0
8	.48	.39	2.2	3.3	1.9	1.5	2.4	2.4	7.9	7.2	3.9	2.9
9	.48	.39	2.3	3.1	1.9	1.5	2.4	2.5	8.3	7.0	3.9	2.9
10	.48	.39	2.3	3.1	1.9	1.3	2.3	2.7	8.3	7.0	3.8	2.8
11	.45	.39	2.2	3.1	1.9	1.4	2.3	2.8	8.8	6.9	3.8	2.8
12	.48	.39	2.2	3.0	1.9	1.3	2.2	2.9	8.6	6.9	3.8	2.7
13	.45	.39	2.3	2.8	1.7	1.3	2.3	2.9	8.6	6.9	3.7	2.7
14	.45	.39	2.6	2.9	1.7	1.3	2.4	3.0	8.5	6.6	3.6	2.7
15	.43	.39	3.1	2.8	1.8	1.3	2.5	3.2	8.3	6.6	3.4	2.6
16	.45	.37	4.1	2.8	1.7	1.3	2.5	3.4	8.2	6.5	3.3	2.6
17	.45	.39	4.8	2.8	1.7	1.3	2.5	3.3	8.2	6.5	3.3	2.5
18	.43	.39	5.1	2.7	1.7	1.3	2.5	3.3	8.0	6.4	3.2	2.5
19	.41	.37	5.2	2.6	1.6	1.2	2.5	3.4	7.9	6.4	3.2	2.4
20	.41	.37	5.2	2.6	1.6	1.3	2.5	3.7	7.9	6.1	3.1	2.4
21	.41	.41	5.1	2.6	1.5	1.3	2.5	4.2	7.9	6.1	3.1	2.3
22	.41	.41	5.0	2.5	1.6	1.5	2.4	4.4	7.7	6.0	3.1	2.3
23	.41	.43	4.9	2.5	1.5	1.5	2.5	4.5	8.0	6.0	3.1	2.2
24	.41	.53	4.8	2.1	1.5	1.6	2.4	4.8	8.2	6.0	3.0	2.2
25	.39	.59	4.5	2.1	1.5	1.6	2.3	4.9	8.2	5.7	3.0	2.1
26	.39	.96	4.4	2.2	1.5	1.6	2.3	5.0	8.0	5.4	3.0	2.1
27	.39	1.3	4.2	2.1	1.3	1.6	2.2	5.0	7.9	5.2	3.0	2.1
28	.39	1.6	4.1	2.2	1.4	1.7	2.2	5.0	7.9	5.1	2.9	2.1
29	.41	1.7	3.9	2.1	---	1.8	2.2	5.0	7.9	5.0	3.2	2.0
30	.39	1.7	3.9	2.0	---	1.9	2.1	5.0	7.7	4.4	3.3	2.0
31	.39	---	3.8	2.0	---	2.1	---	5.0	---	4.3	3.2	---
TOTAL	13.86	17.41	105.9	85.9	49.3	45.9	71.0	107.6	228.2	197.9	108.6	76.9
MEAN	.45	.58	3.42	2.77	1.76	1.48	2.37	3.47	7.61	6.38	3.50	2.56
MAX	.56	1.7	5.2	3.6	2.2	2.1	2.5	5.0	8.8	7.6	4.3	3.1
MIN	.39	.37	1.7	2.0	1.3	1.2	2.1	2.1	5.1	4.3	2.9	2.0
AC-FT	27	35	210	170	98	91	141	213	453	393	215	153
MEAN†	0.47	.61	3.45	2.80	1.79	1.51	2.39	3.50	7.71	6.57	3.68	2.66
AC-FT†	28.8	36.5	212	172	99.5	92.8	142	215	459	404	226	158

WTR YR 1978 TOTAL 1108.47 MEAN 3.04 MAX 8.8 MIN .37 AC-FT 2200 MEAN† 3.11 AC-FT† 2,250

† Adjusted for diversion by pumpage.

11507001 UPPER KLAMATH LAKE NEAR KLAMATH FALLS, OR

LOCATION.--Lat 42°15'00", long 121°48'55", in NW¼SW¼ sec.19, T.38 S., R.9 E., Klamath County, Hydrologic Unit 18010203, at southeast end of lake, 1.4 mi (2.3 km) upstream from outlet and 2.5 mi (4.0 km) northwest of Main Street Bridge at Klamath Falls.

DRAINAGE AREA.--3,810 mi² (9,870 km²), approximately, including 26.2 mi² (67.9 km²) in closed basin of Crater Lake.

PERIOD OF RECORD.--May 1904 to September 1923 (gage heights only), October 1923 to current year. Monthend contents only October 1923 to September 1927, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 4,098.22 ft (1,249.137 m) National Geodetic Vertical Datum of 1929, or 4,100.00 ft (1,249.680 m) Bureau of Reclamation datum. Gage readings have been reduced to elevations Bureau of Reclamation datum. See WSP 1735 for history of changes prior to Nov. 10, 1923. Since Oct. 1, 1974, supplementary water-stage recorders at sites 7 mi (11 km) north and 21 mi (34 km) northwest at same datum (water-surface transfer by Pacific Power and Light Co.).

REMARKS.--Reservoir is formed by concrete dam at outlet of natural lake, completed in 1921, replacing a temporary dam built in 1919; controlled storage began Apr. 15, 1919. Capacity, 523,700 acre-ft (646 hm³) between elevations 4,136.0 ft (1,260.65 m) and 4,143.3 ft (1,262.88 m). Dead storage below elevation 4,136.0 ft (1,260.65 m) is 211,300 acre-ft (261 hm³). Stored water may be diverted through "A" Canal for irrigation on land under Klamath project of Bureau of Reclamation, or released to Link River through dam or powerplants at Klamath Falls. Contents given herein represent those above elevation 4,136.0 ft (1,260.65 m). Prior to Oct. 1, 1973, contents given represented those above elevation 4,135.0 ft (1,260.35 m). Prior to Sept. 30, 1974, contents at end of month obtained by averaging elevations for last 3 days of month and first 3 days of following month to compensate for wind effect. Since Oct. 1, 1974, daily elevations are weighted mean of elevations at base and supplementary gages; contents at end of month are obtained from weighted midnight elevations of base and supplementary gages.

COOPERATION.—Capacity table furnished by Bureau of Reclamation, Klamath Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 4,144.98 ft (1,263.390 m) about Apr. 20, 1904, from high-water marks; minimum recorded, 4,135.55 ft (1,260.516 m) Oct. 30, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum daily elevation, 4,143.04 ft (1,262.799 m) May 29; minimum daily, 4,139.44 ft (1,261.701 m) Oct. 6, 7, 10-12.

CAPACITY TABLE (ELEVATION, IN FEET, AND CONTENTS, IN ACRE-FEET)

4,136	0	4,139	193,700	4,142	414,400
4,137	61,300	4,140	262,600	4,143	498,300
4,138	127,000	4,141	335,400	4,143.3	523,700

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4139.49	4139.59	4140.54	4141.13	4141.44	4141.84	4142.53	4142.92	4142.98	4142.44	4141.56	4140.54
2	4139.51	4139.63	4140.56	4141.11	4141.46	4141.90	4142.52	4142.92	4142.95	4142.46	4141.50	4140.52
3	4139.51	4139.62	4140.64	4141.10	4141.53	4141.87	4142.45	4142.93	4142.97	4142.46	4141.46	4140.47
4	4139.50	4139.58	4140.72	4141.06	4141.56	4141.90	4142.58	4142.94	4142.94	4142.44	4141.42	4140.49
5	4139.47	4139.62	4140.74	4141.10	4141.50	4141.95	4142.60	4142.94	4142.93	4142.43	4141.38	4140.47
6	4139.44	4139.67	4140.74	4141.15	4141.55	4141.99	4142.72	4142.94	4142.91	4142.42	4141.34	4140.50
7	4139.44	4139.68	4140.82	4141.18	4141.56	4141.95	4142.80	4142.92	4142.90	4142.41	4141.29	4140.50
8	4139.45	4139.69	4140.84	4141.18	4141.58	4142.14	4142.82	4142.94	4142.86	4142.40	4141.25	4140.48
9	4139.45	4139.68	4140.88	4141.23	4141.73	4142.26	4142.86	4142.95	4142.86	4142.38	4141.22	4140.38
10	4139.44	4139.68	4140.87	4141.28	4141.82	4142.28	4142.90	4142.98	4142.80	4142.37	4141.18	4140.50
11	4139.44	4139.63	4140.88	4141.31	4141.72	4142.31	4142.93	4142.98	4142.76	4142.33	4141.10	4140.54
12	4139.44	4139.68	4140.92	4141.36	4141.65	4142.31	4142.94	4142.98	4142.72	4142.30	4141.05	4140.53
13	4139.45	4139.69	4140.93	4141.34	4141.66	4142.30	4142.92	4142.95	4142.72	4142.26	4141.03	4140.54
14	4139.47	4139.71	4141.06	4141.35	4141.62	4142.30	4142.79	4142.95	4142.71	4142.24	4140.98	4140.58
15	4139.48	4139.72	4141.19	4141.40	4141.65	4142.29	4142.79	4143.00	4142.68	4142.21	4140.94	4140.58
16	4139.50	4139.74	4141.23	4141.42	4141.64	4142.29	4142.83	4143.03	4142.63	4142.19	4140.92	4140.61
17	4139.50	4139.76	4141.34	4141.54	4141.64	4142.30	4142.80	4143.02	4142.60	4142.17	4140.87	4140.62
18	4139.51	4139.75	4141.32	4141.55	4141.67	4142.31	4142.82	4143.02	4142.58	4142.12	4140.83	4140.58
19	4139.51	4139.73	4141.31	4141.58	4141.67	4142.32	4142.79	4143.01	4142.58	4142.09	4140.79	4140.56
20	4139.51	4139.72	4141.30	4141.58	4141.68	4142.32	4142.84	4143.01	4142.56	4142.06	4140.74	4140.54
21	4139.49	4139.80	4141.21	4141.56	4141.68	4142.34	4142.84	4143.02	4142.55	4142.00	4140.72	4140.53
22	4139.50	4139.89	4141.21	4141.57	4141.70	4142.32	4142.86	4143.03	4142.51	4141.96	4140.72	4140.53
23	4139.50	4139.93	4141.19	4141.55	4141.71	4142.32	4142.89	4143.01	4142.48	4141.92	4140.67	4140.53
24	4139.51	4140.05	4141.17	4141.52	4141.72	4142.34	4142.84	4142.96	4142.49	4141.88	4140.60	4140.52
25	4139.56	4140.11	4141.15	4141.50	4141.74	4142.38	4142.86	4142.98	4142.46	4141.86	4140.66	4140.52
26	4139.59	4140.20	4141.13	4141.50	4141.78	4142.40	4142.90	4142.98	4142.47	4141.82	4140.67	4140.47
27	4139.56	4140.27	4141.14	4141.49	4141.80	4142.42	4142.90	4143.00	4142.45	4141.78	4140.64	4140.50
28	4139.50	4140.37	4141.12	4141.48	4141.81	4142.44	4142.90	4143.02	4142.40	4141.73	4140.63	4140.49
29	4139.54	4140.42	4141.11	4141.48	---	4142.46	4142.90	4143.04	4142.41	4141.69	4140.62	4140.48
30	4139.58	4140.50	4141.12	4141.48	---	4142.48	4142.92	4143.03	4142.43	4141.65	4140.59	4140.48
31	4139.60	---	4141.13	4141.47	---	4142.51	---	4143.00	---	4141.61	4140.58	---
MEAN	4139.50	4139.84	4141.02	4141.37	4141.65	4142.24	4142.80	4142.98	4142.68	4142.13	4140.97	4140.52
MAX	4139.60	4140.50	4141.34	4141.58	4141.82	4142.51	4142.94	4143.04	4142.98	4142.46	4141.56	4140.62
MIN	4139.44	4139.58	4140.54	4141.06	4141.44	4141.84	4142.45	4142.92	4142.40	4141.61	4140.58	4140.38
(†)	233,300	300,600	345,300	370,900	399,700	457,700	494,000	496,600	455,200	379,600	303,500	295,500
(‡)	+7,600	+67,300	+44,700	+25,600	+28,800	+58,000	+36,300	+2,600	-41,400	-75,600	-76,100	-8,000

CAL YR 1977 MEAN 4141.13 MAX 4142.77 MIN 4139.26 AC-FT‡ +25,600
WTR YR 1978 MEAN 4141.47 MAX 4143.04 MIN 4139.44 AC-FT‡ +69,800

† Contents in acre-feet at end of month.
‡ Change in contents, in acre-feet.

11507200 (revised) "A" CANAL AT KLAMATH FALLS, OR

LOCATION.--Lat 42°12'20", long 121°48'05", in NE¼ sec.30, T.38 S., R.9 E., Klamath County, Hydrologic Unit 18010204, on left bank 300 ft (91 m) downstream from headgates of canal and 1.0 mi (1.6 km) northwest of Klamath Falls.

PERIOD OF RECORD.--October 1910 to current year. Published as "Klamath Main Canal" 1911-12.

GAGE.--Water-stage recorder. Datum of gage is 4,126.22 ft (1,257.672 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to May 1, 1923, water-stage recorder at site 0.2 mi (0.3 km) downstream at head of tunnel and at different datum. May 1, 1923, to Apr. 20, 1924, water-stage recorder at site 1.0 mi (1.6 km) downstream, just below tunnel at different datum. Apr. 21, 1924, to Apr. 14, 1925, nonrecording gage at present site and datum.

REMARKS.--Records fair. Canal diverts water from Upper Klamath Lake in NE¼ sec.30, T.38 S., R.9 E., for irrigation of lands east of Klamath River on both sides of Lost River. Most of return water reaches Lost River.

COOPERATION.--Gage-height record, and records of daily discharge furnished by Klamath Irrigation District.

AVERAGE DISCHARGE.--68 years, 268 ft³/s (7.59 m³/s), 194,200 acre-ft/yr (239 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,180 ft³/s (33.4 m³/s) June 24, 1961; no flow for several months in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193	.00	.00	.00	.00	.00	.00	111	949	708	1010	711
2	190	.00	.00	.00	.00	.00	.00	134	952	709	1010	699
3	190	.00	.00	.00	.00	.00	29	157	1000	720	988	711
4	190	.00	.00	.00	.00	.00	49	178	1010	795	977	718
5	194	.00	.00	.00	.00	.00	48	180	992	798	970	705
6	204	.00	.00	.00	.00	.00	37	199	1010	874	928	712
7	204	.00	.00	.00	.00	.00	32	229	1020	929	892	703
8	193	.00	.00	.00	.00	.00	34	270	1010	957	918	665
9	186	.00	.00	.00	.00	.00	72	337	1010	971	928	620
10	62	.00	.00	.00	.00	.00	86	389	985	979	920	566
11	.00	.00	.00	.00	.00	.00	85	404	960	977	923	538
12	.00	.00	.00	.00	.00	.00	98	434	973	977	921	532
13	.00	.00	.00	.00	.00	.00	158	437	964	965	884	523
14	.00	.00	.00	.00	.00	.00	172	452	972	957	863	498
15	.00	.00	.00	.00	.00	.00	157	475	991	969	839	488
16	.00	.00	.00	.00	.00	.00	142	451	1000	981	821	487
17	.00	.00	.00	.00	.00	.00	135	454	998	1010	802	491
18	.00	.00	.00	.00	.00	.00	133	470	986	1020	818	479
19	.00	.00	.00	.00	.00	.00	144	564	866	1020	816	455
20	.00	.00	.00	.00	.00	.00	159	607	851	1020	819	447
21	.00	.00	.00	.00	.00	.00	161	634	943	1020	823	444
22	.00	.00	.00	.00	.00	.00	160	675	965	1030	813	432
23	.00	.00	.00	.00	.00	.00	153	732	983	1020	784	428
24	.00	.00	.00	.00	.00	.00	150	746	970	1020	766	452
25	.00	.00	.00	.00	.00	.00	125	746	895	1020	749	479
26	.00	.00	.00	.00	.00	.00	100	734	834	1030	727	497
27	.00	.00	.00	.00	.00	.00	100	718	773	1010	722	509
28	.00	.00	.00	.00	.00	.00	100	743	778	1020	743	504
29	.00	.00	.00	.00	---	.00	99	799	769	1000	733	500
30	.00	.00	.00	.00	---	.00	100	828	729	991	743	487
31	.00	---	.00	.00	---	.00	---	900	---	1010	738	---
TOTAL	1806.00	.00	.00	.00	.00	.00	3018.00	15187	28138	29507	26388	16480
MEAN	58.3	.000	.000	.000	.000	.000	101	490	938	952	851	549
MAX	204	.00	.00	.00	.00	.00	172	900	1020	1030	1010	718
MIN	.00	.00	.00	.00	.00	.00	.00	111	729	708	722	428
AC-FT	3580	.00	.00	.00	.00	.00	5990	30120	55810	58530	52340	32690

CAL YR 1977 TOTAL 135154.00 MEAN 370 MAX 1020 MIN .00 AC-FT 268100
WTR YR 1978 TOTAL 120524.00 MEAN 330 MAX 1030 MIN .00 AC-FT 239100

11507501 LINK RIVER AT KLAMATH FALLS, OR

LOCATION.—Lat 42°13'25", long 121°47'35", in SW¼NW¼ sec.32, T.38 S., R.9 E., Klamath County, Hydrologic Unit 18010204, on right bank 600 ft (183 m) upstream from outlet of Keno Canal and 0.4 mi (0.6 km) upstream from Main Street Bridge at Klamath Falls.

DRAINAGE AREA.—3,810 mi^2 (9,870 km^2), approximately, including 26.2 mi^2 (67.9 km^2) in closed basin of Crater Lake.

PERIOD OF RECORD.—May 1904 to current year.

GAGE.—Water-stage recorder. Datum of gage is 4,083.71 ft (1,244.715 m) National Geodetic Vertical Datum of 1929, or 4,085.50 ft (1,245.260 m) above mean sea level, datum of Bureau of Reclamation. Prior to Sept. 14, 1912, water-stage recorder or nonrecording gages at several sites within 0.5 mi (0.8 km) of present site at various datums. Sept. 14, 1912, to Nov. 23, 1923, at site 600 ft (183 m) downstream at datum 5.42 ft (1.652 m) lower. Nov. 24, 1923, to Nov. 15, 1961, at site on left bank at present datum.

REMARKS.--Records good. Flow regulated since 1919 by Upper Klamath Lake (see station 11507000). Large diurnal fluctuation caused by powerplant above station. Water diverted above station by main or "A" Canal of Klamath project (see station 11507200). Many other diversions above lake. All records presented herein include flow in Keno Canal which, since September 1908, has diverted from Upper Klamath Lake at Link River Dam for power generation, and returns flow to Link River below station.

AVERAGE DISCHARGE.—74 years, 1,600 ft^3/s (45.31 m^3/s), 1,159,000 acre-ft/yr (1.43 km^3/yr), not adjusted for "A" Canal.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,400 ft^3/s (266 m^3/s) May 12, 1904, gage height at Main Street Bridge, 7.30 ft (2.225 m), datum then in use, from floodmarks; minimum daily, 17 ft^3/s (0.48 m^3/s) Dec. 13, 1937.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,810 ft^3/s (136 m^3/s) Dec. 17; minimum daily, 266 ft^3/s (7.53 m^3/s) June 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	955	1330	833	2810	2390	1720	2060	2340	1220	298	952	782
2	882	1230	861	2580	2340	1710	2240	2350	1120	428	1100	701
3	1080	874	1000	2570	2320	1680	1660	2290	773	623	1200	665
4	1310	740	919	2320	2370	1650	1520	2160	692	572	1160	773
5	1290	689	850	2020	2370	1430	1770	1860	818	563	1170	836
6	1200	723	946	1790	2000	1340	1790	1440	845	737	1160	782
7	1140	886	991	2060	2170	1390	1700	1380	955	640	1040	845
8	956	1240	937	2170	2540	1280	1390	1360	985	597	1070	755
9	975	1210	1210	1880	3300	2050	1490	1310	985	674	1240	746
10	1010	1150	2050	1690	3740	2750	2300	1230	995	657	1170	606
11	997	869	2110	1630	4150	3250	3180	1490	995	614	1110	623
12	1110	681	2170	2090	4330	3390	3440	1700	935	657	1080	665
13	1150	797	2050	2630	4000	3490	3540	1690	875	692	1080	538
14	806	899	1940	3200	3050	3490	3250	1670	885	737	1080	298
15	478	1170	2470	3160	2520	3250	3150	1630	1010	773	1010	337
16	631	1290	2950	3470	2310	2820	3190	1700	1090	905	1030	572
17	815	1300	4030	4120	2260	2570	2920	1770	1070	755	1080	701
18	1090	1310	4580	4450	2310	2450	2740	1910	865	773	1060	701
19	1240	1260	4580	4620	2210	2420	2670	2010	710	836	1140	895
20	1160	1230	4010	4710	2240	2290	2750	1910	737	836	1010	995
21	876	1140	3800	4380	2270	2240	2110	1860	935	827	865	1020
22	701	895	3550	4470	2140	2170	1860	1630	1020	773	792	955
23	737	1010	3520	4300	1640	2080	3030	1410	1090	773	767	845
24	683	640	3510	3800	1730	2050	2850	975	865	875	443	915
25	881	691	3350	3460	1680	2050	2740	916	665	1260	572	915
26	1050	674	3450	3250	1670	2080	2320	650	710	1220	719	945
27	1110	632	3550	3040	1680	2140	2340	546	521	1240	755	995
28	1030	681	3250	2840	1730	2140	2330	572	453	1110	845	985
29	788	861	2870	2850	---	2140	2250	915	419	1060	674	975
30	729	878	2550	2750	---	2180	2280	985	266	1010	755	885
31	908	---	2600	2630	---	2280	---	1090	---	988	746	---
TOTAL	29768	28980	77487	93740	69460	69970	72860	46749	25504	24503	29875	23251
MEAN	960	966	2500	3024	2481	2257	2429	1508	850	790	964	775
MAX	1310	1330	4580	4710	4330	3490	3540	2350	1220	1260	1240	1020
MIN	478	632	833	1630	1640	1280	1390	546	266	298	443	298
AC-FT	59040	57480	153700	185900	137800	138800	144500	92730	50590	48600	59260	46120

CAL YR 1977 TOTAL 336446 MEAN 922 MAX 4580 MIN 98 AC-FT 667300
WTR YR 1978 TOTAL 592147 MEAN 1622 MAX 4710 MIN 266 AC-FT 1175000

11509500 KLAMATH RIVER AT KENO, OR

LOCATION.--Lat 42°08'00", long 121°57'40", in NW¼SE¼ sec.35, T.39 S., R.7 E., Klamath County, Hydrologic Unit 18010206, on left bank 1.7 mi (2.7 km) northwest of Keno and 4.5 mi (7.2 km) upstream from Spencer Creek.

DRAINAGE AREA.--3,920 mi^2 (10,200 km^2), approximately (not including Lost River or Lower Klamath Lake basins).

PERIOD OF RECORD.--June 1904 to December 1913, October 1929 to current year. Monthly discharge only October to December 1929, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 3,961 ft (1,207.3 m) National Geodetic Vertical Datum of 1929 (from river-profile survey). See WSP 1735 for history of changes prior to Nov. 6, 1954.

REMARKS.--Records good. Flow regulated since 1919 by Upper Klamath Lake (see station 11507001). Diversions for irrigation above station.

AVERAGE DISCHARGE.--58 years, 1,689 ft^3/s (47.83 m^3/s), 1,224,000 acre-ft/yr (1.51 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft^3/s (286 m^3/s) Mar. 5, 1972, gage height, 12.73 ft (3.880 m); minimum, 26 ft^3/s (0.74 m^3/s) Sept. 23, 1956; minimum daily, 60 ft^3/s (1.70 m^3/s) May 19, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 15.3 ft (4.66 m), from floodmark (original datum), about May 10, 1904, discharge, 9,250 ft^3/s (262 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,140 ft^3/s (174 m^3/s) Jan. 18, gage height, 10.39 ft (3.167 m); minimum, 232 ft^3/s (6.57 m^3/s) June 6; minimum daily, 252 ft^3/s (7.14 m^3/s) July 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	944	1270	1180	3210	2550	2100	2600	2570	680	330	640	938
2	922	1060	1180	2980	2550	2100	2590	2560	685	330	640	938
3	1070	795	1170	2970	2550	2100	2590	2370	544	330	644	938
4	1290	747	1170	2810	2550	2100	2580	2140	354	330	658	938
5	1280	635	1180	2640	2480	2100	2610	1960	392	330	690	938
6	1190	713	1170	2930	2590	2300	2620	1690	283	330	690	944
7	1200	855	1170	3140	2640	2450	2610	1660	322	330	690	938
8	1210	1150	1180	2810	3040	2480	2620	1560	339	330	690	938
9	1230	1090	1650	2640	3620	2960	2610	1430	348	330	685	938
10	1170	1120	2320	2640	4140	3730	2980	1520	532	257	676	944
11	1210	954	2300	2640	4790	4070	3770	1770	591	254	676	901
12	1220	709	2350	2820	4790	4070	4070	1880	604	254	680	800
13	1140	653	2350	3280	4390	4070	4080	1870	496	254	685	737
14	949	901	2440	3790	3360	4070	3790	1860	473	252	704	737
15	622	1240	3420	4090	2740	3850	3530	1860	363	252	732	786
16	695	1300	4850	4290	2540	3300	3560	1970	402	254	732	850
17	886	1300	5340	4830	2530	3000	3370	2090	595	257	732	840
18	1100	1300	5350	5280	2530	2830	3090	2090	591	257	747	881
19	1100	1310	4830	5220	2530	2830	3090	2010	376	259	776	933
20	1120	1300	4520	5220	2530	2740	3090	1870	313	259	776	933
21	901	1250	4330	5110	2530	2570	3560	1880	297	259	776	933
22	680	1170	4010	5110	2340	2500	3570	1740	299	259	776	933
23	649	1070	3990	4890	2090	2500	2360	1420	297	259	776	933
24	635	944	3980	4200	2090	2500	1940	1160	299	342	771	933
25	805	933	4110	3580	2090	2490	2940	998	299	477	771	933
26	1110	938	4240	3460	2090	2490	2730	791	299	516	766	928
27	1130	1130	4160	3290	2100	2490	2620	680	299	516	781	928
28	959	1180	4010	3050	2100	2500	2560	680	299	520	786	933
29	658	1170	4010	3050	---	2500	2570	835	310	520	756	928
30	658	1170	3800	2960	---	2550	2570	644	330	516	791	928
31	907	---	3490	2720	---	2600	---	644	---	574	855	---
TOTAL	30640	31357	95250	111650	78870	86940	89270	50202	12311	10537	22548	27100
MEAN	988	1045	3073	3602	2817	2805	2976	1619	410	340	727	903
MAX	1290	1310	5350	5280	4790	4070	4080	2570	685	574	855	944
MIN	622	635	1170	2640	2090	2100	1940	644	283	252	640	737
AC-FT	60770	62200	188900	221500	156400	172400	177100	99580	24420	20900	44720	53750

CAL YR 1977 TOTAL 325322 MEAN 891 MAX 5350 MIN 254 AC-FT 645300
WTR YR 1978 TOTAL 646675 MEAN 1772 MAX 5350 MIN 252 AC-FT 1283000

11510700 KLAMATH RIVER BELOW JOHN C. BOYLE POWERPLANT, NEAR KENO, OR

LOCATION.--Lat 42°05'05", long 122°04'20", in SE¼SE¼ sec.14, T.40 S., R.6 E., Klamath County, Hydrologic Unit 18010206, on right bank 0.7 mi (1.1 km) downstream from John C. Boyle powerplant, 8 mi (13 km) downstream from Spencer Creek, and 8.5 mi (13.7 km) southwest of Keno.

DRAINAGE AREA.--4,080 mi^2 (10,570 km^2), approximately (not including Lost River or Lower Klamath Lake basins).

PERIOD OF RECORD.--January 1959 to current year. Prior to Oct. 1, 1961, published as "below Big Bend powerplant."

GAGE.--Water-stage recorder. Datum of gage is 3,274.82 ft (998.165 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.).

REMARKS.--Records good. Flow regulated by Upper Klamath Lake (see station 11507001). Large diurnal fluctuation caused by John C. Boyle powerplant and 2 powerplants below Upper Klamath Lake. Diversions for irrigation above station.

AVERAGE DISCHARGE.--19 years, 1,881 ft^3/s (53.27 m^3/s), 1,363,000 acre-ft/yr (1.68 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft^3/s (312 m^3/s) Mar. 5, 1972, gage height, 9.33 ft (2.844 m); minimum, 283 ft^3/s (8.01 m^3/s) Feb. 17, 1968; minimum daily, 317 ft^3/s (8.98 m^3/s) July 25, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,620 ft^3/s (187 m^3/s) Jan. 18, gage height, 7.76 ft (2.365 m); minimum, 354 ft^3/s (10.0 m^3/s) many days; minimum daily, 354 ft^3/s (10.0 m^3/s) July 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1160	1420	1460	3340	2810	2330	2810	2820	955	672	955	1190
2	1180	1460	1460	3140	2810	2330	2810	2810	955	357	913	1230
3	1190	1040	1460	3140	2800	2330	2800	2700	865	760	906	1240
4	1460	990	1460	2990	2810	2330	2810	2380	630	361	906	1240
5	1440	906	1460	2740	2810	2330	2810	2200	630	718	913	1160
6	1450	906	1440	3170	2800	2290	2810	1940	635	712	724	1190
7	1490	1260	1440	3250	2810	2810	2810	1830	545	718	948	1200
8	1510	1510	1430	3070	3050	2810	2810	1780	361	672	948	1170
9	1510	1440	1710	2880	3710	3140	2810	1600	595	540	948	1170
10	1510	1430	2300	2840	3980	3840	3050	1610	585	565	948	1200
11	1510	1310	2410	2880	4540	4070	3790	1790	969	357	990	1100
12	1510	899	2510	2950	4580	4050	4020	2050	962	354	990	983
13	1450	899	2740	3370	4320	4070	4040	2010	689	354	585	976
14	1370	1110	2750	3790	3410	4070	3850	2010	724	435	948	1050
15	1000	1440	3410	4100	2810	3900	3580	2100	635	495	997	997
16	997	1440	4720	4210	2820	3460	3630	2220	635	495	997	1030
17	1150	1480	5060	4700	2810	3250	3520	2220	814	491	990	1030
18	1460	1550	5210	5100	2810	3010	3230	2370	865	513	1000	1180
19	1400	1620	4720	5020	2800	3020	3250	2240	683	500	1060	1190
20	1150	1610	4350	5040	2800	2960	3230	2050	590	500	1050	1160
21	1360	1490	4260	4920	2800	2810	3400	2050	590	635	1040	1160
22	1000	1330	4000	4920	2430	2750	3650	1900	545	590	1040	1190
23	990	1310	3980	4740	2220	2810	2840	1820	585	364	990	1190
24	990	1310	4000	4170	2280	2800	2150	1310	585	590	955	1190
25	1130	1310	4000	3630	2310	2800	3080	1250	361	778	948	1160
26	1160	1130	4170	3550	2260	2810	2820	976	585	820	955	1120
27	1450	1130	4160	3430	2200	2810	2820	859	630	820	948	1080
28	1150	1160	3970	3190	2330	2810	2820	962	540	913	1060	1120
29	1060	1470	4000	3190	---	2800	2820	948	640	826	1040	1120
30	1050	1460	3870	3160	---	2810	2810	1330	672	364	1060	1120
31	1110	---	3550	2890	---	2810	---	808	---	1060	1130	---
TOTAL	39347	38820	97460	113510	82920	93220	93680	56943	20055	18329	29882	34136
MEAN	1269	1294	3144	3662	2961	3007	3123	1837	669	591	964	1138
MAX	1510	1620	5210	5100	4580	4070	4040	2820	969	1060	1130	1240
MIN	990	899	1430	2740	2200	2290	2150	808	361	354	585	976
AC-FT	78040	77000	193300	225100	164500	184900	185800	112900	39780	36360	59270	67710

CAL YR 1977 TOTAL 405647 MEAN 1111 MAX 5210 MIN 340 AC-FT 804600
WTR YR 1978 TOTAL 718302 MEAN 1968 MAX 5210 MIN 354 AC-FT 1425000

11516530 KLAMATH RIVER BELOW IRON GATE DAM, CA

LOCATION.--Lat 41°55'41", long 122°26'35", in SE¼NE¼ sec.17, T.47 N., R.5 W., Siskiyou County, Hydrologic Unit 18010206, on left bank 0.1 mi (0.2 km) downstream from Bogus Creek, 0.6 mi (1.0 km) downstream from Iron Gate Dam, and 5.9 mi (9.5 km) northeast of Hornbrook.

DRAINAGE AREA.--4,630 mi^2 (11,990 km^2), approximately (not including Lost River and Lower Klamath Lake basins).

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,162.44 ft (659.112 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Power and Light Co.).

REMARKS.--Records excellent. Flow regulated by Upper Klamath Lake (see station 11507001), othe smaller reservoirs, and diversions above station. Iron gate Dam 0.6 mi (1.0 km) upstream is a re-regulating reservoir. Records of chemical analyses and water temperatures for the current year are published in the California district report.

AVERAGE DISCHARGE.--18 years, 2,256 ft^3/s (63.89 m^3/s), 1,634,000 acre-ft/yr (2.01 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft^3/s (833 m^3/s) Dec. 22, 1964, gage height, 13.63 ft (4.154 m), from rating curve extended above 15,000 ft^3/s (425 m^3/s), on basis of slope-area measurement of maximum flow; minimum daily, 647 ft^3/s (18.3 m^3/s) Oct. 30, Nov. 6, 1960, Sept. 24, Oct. 1, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,580 ft^3/s (215 m^3/s) Dec. 14, gage height, 7.71 ft (2.350 m); minimum daily, 724 ft^3/s (20.5 m^3/s) June 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1340	1320	1750	3870	3100	2460	3290	3160	838	734	1020	1320
2	1340	1320	1750	3400	3120	2580	3270	3120	801	730	1020	1320
3	1340	1320	1750	3410	3230	2820	3250	2900	804	734	1030	1340
4	1340	1310	1760	3400	3220	2820	3280	2620	804	736	1030	1340
5	1340	1310	1760	3610	3190	2880	3340	2540	814	727	1030	1340
6	1330	1310	1750	3530	3270	3070	3430	2200	790	728	1040	1340
7	1320	1310	1750	3450	3430	3420	3330	2180	772	727	1030	1340
8	1320	1310	1750	3450	3990	4040	3290	2170	774	728	1020	1330
9	1320	1330	2040	3810	4590	4310	3230	2150	776	729	1030	1330
10	1320	1320	2710	3780	4840	4700	3660	2090	776	728	1030	1330
11	1310	1310	2950	3580	5450	5130	4520	2100	777	731	1040	1330
12	1310	1310	2960	3670	5390	5000	4650	2180	775	731	1040	1320
13	1310	1310	3320	4040	5070	4890	4650	2190	781	730	1040	1330
14	1310	1320	6290	4420	4040	4870	4530	2190	865	729	1040	1330
15	1310	1330	5800	4940	3330	4570	4240	2250	875	729	1040	1330
16	1310	1330	5930	5960	3210	3800	4220	2320	735	732	1040	1330
17	1310	1330	6020	6410	3190	3440	4100	2390	730	733	1040	1330
18	1300	1340	6280	6590	3290	3430	3750	2420	732	731	1040	1330
19	1320	1330	5620	6290	3240	3420	3580	2570	759	735	1040	1330
20	1320	1330	4980	6090	3160	3370	3510	2410	861	729	1040	1320
21	1320	1330	4930	5850	3200	3170	3650	2410	725	728	1050	1320
22	1320	1360	4370	5740	3140	3280	3380	2390	730	727	1070	1320
23	1320	1330	4820	5500	2680	3380	3230	2200	727	728	1050	1320
24	1320	1360	4680	4770	2450	3370	2890	1990	727	728	1050	1320
25	1340	1340	4590	4060	2300	3320	3220	1760	724	739	1050	1320
26	1330	1560	4570	3940	2270	3310	3160	1390	731	730	1050	1320
27	1320	1770	5040	3740	2330	3250	3150	1150	732	731	1050	1310
28	1320	1750	4910	3390	2460	3110	3160	1150	743	738	1050	1310
29	1320	1750	4840	3390	---	3100	3150	1150	739	743	1050	1320
30	1320	1750	4930	3390	---	3110	3180	1150	733	743	1050	1320
31	1320	---	4380	3330	---	3170	---	1150	---	746	1070	---
TOTAL	40970	41700	120980	134800	96180	110590	107290	66040	23150	22692	32270	39790
MEAN	1322	1390	3903	4348	3435	3567	3576	2130	772	732	1041	1326
MAX	1340	1770	6290	6590	5450	5130	4650	3160	875	746	1070	1340
MIN	1300	1310	1750	3330	2270	2460	2890	1150	724	727	1020	1310
AC-FT	81260	82710	240000	267400	190800	219400	212800	131000	45920	45010	64010	78920

CAL YR 1977 TOTAL 466362 MEAN 1278 MAX 6290 MIN 706 AC-FT 925000
WTR YR 1978 TOTAL 836452 MEAN 2292 MAX 6590 MIN 724 AC-FT 1659000

12472800 COLUMBIA RIVER BELOW PRIEST RAPIDS DAM, WA

LOCATION.--Lat 46°37'44", long 119°51'49", in SE¼NW¼ sec.7, T.13 N., R.24 E., Grant County, Hydrologic Unit 17020016, on left bank 2.6 mi (4.2 km) downstream from Priest Rapids Dam, 14.7 mi (23.7 km) south of Beverly, and at mile 394.5 (634.8 km).

DRAINAGE AREA.--96,000 mi^2 (249,000 km^2), approximately.

PERIOD OF RECORD.--January 1917 to current year. January 1917 to September 1930, at site 3.4 mi (5.5 km) downstream, published as "at Vernita." October 1930 to July 27, 1959, at site 46.5 mi (74.8 km) upstream, published as "at Trinidad."

REVISED RECORDS.--WSP 1933: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1930, nonrecording gages at site 3.4 mi (5.5 km) downstream at datum 388.7 ft (118.48 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1930, to July 27, 1959, water-stage recorder at site 46.5 mi (74.8 km) upstream at datum 499.3 ft (152.19 m) National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Records excellent. Diversions for irrigation of about 500,000 acres (2,020 km^2) above station. Flow regulated by 10 major reservoirs and numerous smaller reservoirs and powerplants.

AVERAGE DISCHARGE.--61 years, 120,200 ft^3/s (3,404 m^3/s), 87,080,000 acre-ft/yr (107,000 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 692,600 ft^3/s (19,600 m^3/s) June 12, 1948, gage height, 59.35 ft (18.090 m), site and datum then in use; minimum, 4,120 ft^3/s (117 m^3/s) Feb. 10, 1932, gage height, 11.40 ft (3.475 m) site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 7, 1894, reached a discharge of about 740,000 ft^3/s (21,000 m^3/s), based on information obtained at other points.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 203,000 ft^3/s (5,750 m^3/s) June 7, elevation, 411.78 ft (125.511 m); minimum, 28,300 ft^3/s (801 m^3/s) Nov. 9, elevation, 395.01 ft (120.399 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60000	75600	94900	69100	134000	111000	126000	132000	132000	124000	126000	86300
2	47300	79000	77300	88700	124000	113000	121000	138000	137000	99800	110000	72100
3	60300	94500	54100	111000	114000	123000	126000	141000	93100	82000	67700	65500
4	83800	88800	58400	94000	104000	109000	129000	148000	95900	101000	81600	79900
5	76100	63900	89600	103000	75500	91700	138000	162000	125000	88600	92200	104000
6	73600	58300	85700	96600	88600	112000	141000	149000	143000	138000	84000	126000
7	71900	79700	95700	99500	101000	90000	140000	125000	143000	130000	104000	146000
8	66500	101000	102000	66600	92400	80900	140000	138000	162000	127000	121000	150000
9	48500	71400	80700	90300	93300	85700	124000	153000	151000	132000	114000	150000
10	66900	62800	76000	106000	96300	88500	130000	160000	150000	120000	110000	155000
11	80200	78200	74000	136000	93600	76800	137000	160000	158000	140000	113000	132000
12	73500	60000	97200	96700	54900	58300	138000	153000	158000	142000	109000	109000
13	62600	53500	72300	101000	109000	86900	157000	140000	146000	142000	80200	132000
14	69400	89400	79200	86000	114000	98900	172000	134000	145000	143000	103000	121000
15	48500	98500	86000	90600	105000	85900	182000	145000	149000	159000	113000	120000
16	41900	102000	101000	99300	119000	90700	149000	144000	125000	160000	99600	111000
17	75700	105000	75700	94400	114000	85000	127000	148000	131000	151000	112000	116000
18	77100	96400	69400	97600	102000	70300	135000	143000	99500	96700	98300	97600
19	81900	94100	93800	92200	81300	57100	138000	132000	130000	136000	74300	99700
20	78400	99100	89300	95300	96200	93000	142000	149000	132000	132000	70500	116000
21	73500	109000	96800	93700	116000	88300	143000	156000	130000	153000	107000	95200
22	65700	114000	111000	84500	120000	104000	141000	167000	121000	147000	91700	96000
23	46100	105000	79500	121000	121000	109000	137000	169000	117000	130000	100000	94100
24	54900	60500	55200	110000	125000	119000	140000	170000	80200	135000	71200	72500
25	60100	78500	39000	113000	109000	103000	126000	167000	123000	135000	86000	88800
26	79900	66000	58400	129000	80500	85000	131000	163000	96600	117000	97900	98200
27	85600	48000	106000	125000	107000	119000	141000	166000	138000	89800	57900	92400
28	79800	83400	93800	109000	112000	120000	142000	165000	120000	111000	93800	104000
29	49400	73600	80800	85100	---	107000	141000	159000	111000	107000	89700	97000
30	47100	96900	84300	136000	---	105000	117000	158000	132000	114000	107000	108000
31	71900	---	78600	137000	---	118000	---	134000	---	122000	80600	---
TOTAL	2058100	2486100	2535700	3157200	2902600	2985000	4151000	4668000	3874300	3904900	2966200	3235300
MEAN	66390	82870	81800	101800	103700	96290	138400	150600	129100	126000	95680	107800
MAX	85600	114000	111000	137000	134000	123000	182000	170000	162000	160000	126000	155000
MIN	41900	48000	39000	66600	54900	57100	117000	125000	80200	82000	57900	65500
AC-FT	4082000	4931000	5030000	6262000	5757000	5921000	8234000	9259000	7685000	7745000	5883000	6417000

CAL YR 1977 TOTAL 30854800 MEAN 84530 MAX 146000 MIN 38400 AC-FT 61200000
WTR YR 1978 TOTAL 38924400 MEAN 106600 MAX 182000 MIN 39000 AC-FT 77210000

13181000 OWYHEE RIVER NEAR ROME, OR

LOCATION.--Lat 42°52'02", long 117°38'52", in SE¼NE¼ sec.14, T.31 S., R.41 E., Malheur County, Hydrologic Unit 17050107, on right bank 0.5 mi (0.8 km) downstream from Jordan Creek, 2.6 mi (4.2 km) north of Rome, and at mile 122.4 (196.9 km).

DRAINAGE AREA.--About 8,000 mi^2 (20,700 km^2).

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,344.20 ft (1,019.312 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 10, 1960, at datum 0.24 ft (0.073 m) lower.

REMARKS.--Records good. Flow regulated by Antelope Reservoir, capacity, 70,000 acre-ft (86.3 hm^3), increased in 1970, and Wild Horse Reservoir, capacity, 32,690 acre-ft (40.3 hm^3), and numerous small reservoirs. Diversions above station for irrigation.

AVERAGE DISCHARGE.--29 years, 913 ft^3/s (25.86 m^3/s), 661,500 acre-ft/yr (816 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,500 ft^3/s (949 m^3/s) Dec. 24, 1964, gage height, 16.7 ft (5.09 m), from floodmark; minimum, 42 ft^3/s (1.19 m^3/s) Aug. 12, 1954, July 28, Aug. 5, 1961, July 31, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,400 ft^3/s (153 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 23	1330	9,990	283	9.93	3.027	Apr. 27	1630	*18,000	510	*13.18	4.017
Apr. 2	2230	7,180	203	8.52	2.597						

Minimum, 86 ft^3/s (2.44 m^3/s) Dec. 12, 13 (result of freezeup).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	119	198	250	316	1350	5220	6200	810	304	166	169
2	135	119	156	198	304	1090	5810	5450	755	300	189	176
3	133	120	144	183	320	939	5660	4840	720	312	192	166
4	133	121	168	249	329	1040	3990	4180	678	324	202	163
5	130	126	176	268	468	2120	3260	3810	651	356	199	157
6	124	129	153	341	600	3620	3290	3370	664	360	195	160
7	121	132	141	334	1110	4490	2850	3010	642	360	179	182
8	121	133	152	300	1510	3920	2880	2750	597	396	176	186
9	119	132	135	308	1430	3750	2960	2410	543	396	166	182
10	117	130	111	325	1260	4540	2780	2140	511	364	157	205
11	115	132	103	469	1110	4070	2580	2000	502	344	153	238
12	115	134	91	490	854	3620	2420	1990	534	324	150	242
13	115	129	92	484	710	3160	2210	1870	511	300	153	222
14	125	128	95	478	650	2280	2040	1690	511	273	150	212
15	126	134	159	538	640	1850	1930	1610	489	248	147	212
16	122	141	610	721	580	1550	1880	1630	440	232	163	199
17	115	141	1050	984	510	1520	1880	1630	416	215	176	192
18	120	138	629	1020	510	3120	1980	1600	404	202	189	182
19	119	136	440	1000	459	4500	1880	1510	412	192	176	173
20	121	134	305	871	520	4990	1810	1390	396	189	169	169
21	122	124	178	799	860	5410	1720	1280	372	192	169	173
22	119	127	184	755	1130	5480	1720	1180	372	195	160	169
23	118	111	231	695	1280	8270	1660	1070	364	192	150	166
24	119	142	273	600	1300	7470	1550	1020	352	186	150	163
25	126	170	275	459	1200	6020	1440	1010	328	186	147	166
26	120	185	252	347	1280	5210	1800	1130	308	182	147	173
27	120	249	228	433	1620	5530	11700	1320	300	176	157	163
28	123	189	237	414	1670	5990	15600	1290	280	169	157	153
29	118	153	226	360	---	6300	10000	1130	284	163	150	144
30	118	181	234	369	---	6250	8000	975	296	153	160	138
31	118	---	252	324	---	5530	---	876	---	147	169	---
TOTAL	3787	4239	7678	15366	24530	124989	114500	67361	14442	7932	5163	5395
MEAN	122	141	248	496	876	4032	3817	2173	481	256	167	180
MAX	140	249	1050	1020	1670	8270	15600	6200	810	396	202	242
MIN	115	111	91	183	304	939	1440	876	280	147	147	138
AC-FT	7510	8410	15230	30480	48660	247900	227100	133600	28650	15730	10240	10700

CAL YR 1977 TOTAL 66665 MEAN 183 MAX 1050 MIN 67 AC-FT 132200
WTR YR 1978 TOTAL 395382 MEAN 1083 MAX 15600 MIN 91 AC-FT 784200

13182500 LAKE OWYHEE NEAR NYSSA, OR

LOCATION.--Lat 43°38'30", long 117°14'30", in NW¼SE¼ sec.20, T.22 S., R.45 E., Malheur County, Hydrologic Unit 17050110, near left abutment on Owyhee Dam on Owyhee River, 21 mi (33.8 km) southwest of Nyssa, and at mile 28.5 (45.9 km).

DRAINAGE AREA.--11,160 mi^2 (28,900 km^2), approximately.

PERIOD OF RECORD.--October 1932 to current year. Prior to October 1958, published as Owyhee Reservoir at Owyhee Dam, near Nyssa.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Oct. 1, 1965, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete arch-gravity dam, completed in September 1932; storage began Oct. 16, 1932. Capacity, 1,122,000 acre-ft (1,380 hm^3) between elevations 2,367.50 ft (721.614 m) bottom of sluice gates and 2,670.00 ft (813.816 m) top of spillway gate, 715,000 acre-ft (882 hm^3) between elevations 2,590.20 ft (789.493 m) diversion tunnel and 2,670.00 ft (813.816 m). Dead storage below elevation 2,367.50 ft (721.614 m) negligible. Figures given herein are contents above elevation 2,367.50 ft (721.614 m). Reservoir generally will not be drawn below elevation 2,590.2 ft (789.493 m) contents, 406,800 acre-ft (502 hm^3), which project considers dead storage. Water is released through diversion tunnel to South Canal for irrigation of lands west of Snake River in vicinity of Homedale, Idaho, and to North Canal for irrigation of lands north and west of Owyhee River, and through sluice gates to river for Owyhee Canal, which diverts about 18 mi (29 km) downstream.

COOPERATION.--Capacity tables furnished by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 1,140,000 acre-ft (1,410 hm^3) Apr. 15, 1952, elevation, 2,671.50 ft (814.273 m); minimum observed since full capacity was attained on May 7, 1936, 437,000 acre-ft (539 hm^3) Oct. 1, 1961, elevation, 2,595.35 ft (791.063 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,127,000 acre-ft (1,390 hm^3) Apr. 30, May 1, elevation, 2,670.42 ft (813.944 m); minimum, 578,000 acre-ft (713 hm^3) Oct. 10, elevation, 2,615.68 ft (797.259 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2,616.44	583,900	-
Oct. 31	2,616.85	587,000	+3,100
Nov. 30	-	a603,200	+16,200
Dec. 31	-	a630,900	+27,700
CAL YR 1977	-	-	-247,100
Jan. 31	-	a666,600	+35,700
Feb. 28	2,632.64	719,200	+52,600
Mar. 31	2,659.06	988,800	+269,600
Apr. 30	2,670.42	1,127,000	+138,200
May 31	2,669.73	1,118,000	-9,000
June 30	2,664.25	1,050,000	-68,000
July 31	2,657.61	972,200	-77,800
Aug. 31	2,650.15	890,000	-82,200
Sept. 30	2,646.23	849,100	-40,900
WTR YR 1978	-	-	+265,200

a Contents interpolated.

13183000 OWYHEE RIVER BELOW OWYHEE DAM, OR

LOCATION.--Lat 43°39'17", long 117°15'16", in SE¼ sec.18, T.22 S., R.45 E., Malheur County, Hydrologic Unit 17050110, on left bank 0.8 mi (1.3 km) downstream from Owyhee Dam, 20 mi (32 km) southwest of Nyssa, and at mile 27.3 (43.9 km).

DRAINAGE AREA.--11,160 mi^2 (28,900 km^2), approximately.

PERIOD OF RECORD.--February 1929 to current year.

REVISED RECORDS.--WSP 983: 1941-42. WSP 1397: 1930, 1933, 1946.

GAGE.--Water-stage recorder. Datum of gage is 2,343.67 ft (714.351 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Records good. Flow regulated since October 1932 by Lake Owyhee (see station 13182500), and by many smaller reservoirs. Diversion of 425,800 acre-ft (525 hm^3) from Lake Owyhee during the year for irrigation of lands below station and outside the basin. Many smaller diversions above Lake Owyhee for irrigation above station.

COOPERATION.--Water-stage recorder inspected by irrigation district employees.

AVERAGE DISCHARGE.--46 years (water years 1933-78), 353 ft^3/s (9.997 m^3/s), 255,700 acre-ft/yr (315 hm^3/yr), not adjusted for storage or diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,900 ft^3/s (649 m^3/s) Apr. 15, 1952, gage height, 15.70 ft (4.785 m); no flow for part of Aug. 8, 9, 1932, when temporary diversion tunnel at Owyhee Dam was closed.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,570 ft^3/s (186 m^3/s) Apr. 30, gage height, 9.71 ft (2.960 m); minimum recorded, 1.0 ft^3/s (0.028 m^3/s) Nov. 4, 7, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	1.2	1.4	1.3	1.9	1.9	5.8	5570	203	156	154	172
2	30	1.2	1.9	1.2	1.9	1.9	8.0	4290	203	155	154	171
3	31	1.2	1.9	1.2	1.9	1.9	9.0	4080	204	157	154	164
4	30	1.2	1.9	1.3	1.8	1.9	8.8	3950	202	158	153	164
5	30	1.2	1.9	1.5	1.9	2.0	8.5	3090	202	158	151	164
6	30	1.2	1.8	1.8	1.9	1.9	9.2	2290	202	158	151	156
7	32	1.1	1.8	1.8	1.8	1.8	12	2240	202	157	151	147
8	31	1.2	1.8	1.7	1.8	1.9	15	2110	221	158	151	147
9	31	1.2	1.8	1.6	1.9	1.8	18	1390	220	158	151	140
10	16	1.7	1.8	1.6	1.5	1.8	20	1110	219	157	152	136
11	2.0	1.6	1.8	1.6	1.3	1.9	23	1110	219	154	152	140
12	1.6	1.6	1.8	1.6	1.5	1.9	45	820	219	151	152	140
13	1.5	1.5	1.8	1.6	1.5	1.9	69	636	216	150	152	140
14	1.6	1.5	1.7	1.7	1.9	1.9	70	776	216	149	152	140
15	1.5	1.6	1.9	1.8	1.9	1.9	70	722	216	148	152	140
16	1.5	1.6	1.7	1.8	1.8	2.0	70	509	213	147	152	140
17	1.6	1.6	1.7	1.8	1.8	2.1	70	266	214	143	152	139
18	1.6	1.6	1.7	1.7	1.8	1.8	70	161	214	142	153	138
19	1.5	1.4	1.6	1.8	1.8	1.8	70	164	211	142	152	140
20	1.5	1.3	1.6	1.7	1.7	1.8	70	180	186	140	152	140
21	1.3	1.2	1.5	1.7	1.8	1.9	70	345	159	139	152	133
22	1.5	1.3	1.3	1.8	1.8	1.9	70	474	152	144	162	128
23	1.5	1.5	1.3	1.8	1.8	1.9	70	281	154	151	170	129
24	1.3	1.7	1.4	1.8	1.8	1.9	70	223	155	151	170	129
25	1.4	1.7	1.5	1.9	1.8	2.5	71	209	155	155	170	128
26	1.4	1.5	1.5	1.9	1.8	2.8	72	206	155	154	170	124
27	1.3	1.5	1.5	1.9	1.9	3.1	1340	206	155	155	170	128
28	1.3	1.4	1.5	1.9	1.9	3.4	5320	207	156	154	170	128
29	1.3	1.4	1.5	1.9	---	3.4	6330	204	158	154	170	128
30	1.2	1.3	1.5	1.9	---	3.4	6190	204	158	154	169	132
31	1.2	---	1.4	1.9	---	3.9	---	205	---	154	172	---
TOTAL	321.6	42.2	51.2	52.5	49.9	67.9	20344.3	38228	5759	4703	4888	4245
MEAN	10.4	1.41	1.65	1.69	1.78	2.19	678	1233	192	152	158	142
MAX	32	1.7	1.9	1.9	1.9	3.9	6330	5570	221	158	172	172
MIN	1.2	1.1	1.3	1.2	1.3	1.8	5.8	161	152	139	151	124
AC-FT	638	84	102	104	99	135	40350	75830	11420	9330	9700	8420
MEAN†	215	274	452	582	949	4,390	3,310	2,100	543	275	179	257
AC-FT†	13,250	16,280	27,800	35,800	52,700	269,800	197,000	129,200	32,320	16,910	11,020	15,310

CAL YR 1977 TOTAL 17480.6 MEAN 47.9 MAX 150 MIN 1.1 AC-FT 34670
WTR YR 1978 TOTAL 78752.6 MEAN 216 MAX 6330 MIN 1.1 AC-FT 156200

† Adjusted for diversions from Lake Owyhee and change in lake contents.

13214000 MALHEUR RIVER NEAR DREWSEY, OR

LOCATION.--Lat 43°47'05", long 118°19'50", in NE¼SE¼ sec.31, T.20 S., R.36 E., Harney County, Hydrologic Unit 17050116, on left bank 300 ft (91 m) downstream from bridge on U.S. Highway 20, 0.5 mi (0.8 km) downstream from Cottonwood Creek, 3.0 mi (4.8 km) southeast of Drewsey, and at mile 129.0 (207.6 km).

DRAINAGE AREA.--910 mi^2 (2,360 km^2), approximately.

PERIOD OF RECORD.--June 1920 to September 1921, November, December 1921, March, April 1922, April to September 1923, June 1926 to current year. Monthly discharge only for some periods, published in WSP 1317. March to September 1914 at site 13 mi (21 km) upstream; records not equivalent owing to inflow from several creeks.

REVISED RECORDS.--WSP 1093: 1927. WSP 1287: Drainage area. WSP 1397: 1921, 1927-31, 1937, drainage area (former site). WSP 1517: 1952.

GAGE.--Water-stage recorder. Datum of gage is 3,479.13 ft (1,060.439 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 27, 1923, water-stage recorder or nonrecording gage at site 0.5 mi (0.8 km) downstream at different datum. Apr. 27, 1923, to June 6, 1939, water-stage recorder at site 7 mi (11 km) downstream at different datum.

REMARKS.--Records good. Slight regulation by small reservoirs above station. Diversions for irrigation above station.

AVERAGE DISCHARGE.--52 years (water years 1927-78), 180 ft^3/s (5.098 m^3/s), 130,400 acre-ft/yr (161 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft^3/s (340 m^3/s) Dec. 23, 1964, gage height, 13.50 ft (4.115 m), from rating curve extended above 4,500 ft^3/s (127 m^3/s) on basis of contracted-opening measurement at gage height 13.20 ft (4.023 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft^3/s (22.7 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 15	1230	946	26.8	5.76	1.756	Apr. 2	0130	*1,720	48.7	*7.38	2.249
Feb. 8	0200	803	22.7	5.33	1.625	Apr. 27	0530	988	28.0	5.88	1.792
Mar. 9	1100	1,410	39.9	6.89	2.100						

Minimum, 2.2 ft^3/s (0.062 m^3/s) Aug. 11.

REVISIONS.--The peak discharge of Feb. 16, 1976 (2300 hours) has been revised to 803 ft^3/s (22.7 m^3/s), gage height, 5.36 ft (1.634 m) and the peak discharge of Apr. 11, 1976 (1730 hours) has been revised to 834 ft^3/s (23.6 m^3/s), gage height, 5.59 ft (1.704 m), superseding figures published in OR-76-1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	54	83	52	85	348	1390	491	117	53	13	7.0
2	29	53	79	55	86	300	1570	460	111	45	13	4.5
3	27	53	100	58	100	289	1270	426	106	40	13	3.9
4	24	53	125	96	237	287	1120	368	94	36	8.5	8.2
5	30	59	91	94	225	385	1030	330	100	32	8.5	6.9
6	28	59	77	98	360	617	1000	304	111	35	7.0	5.7
7	27	56	70	92	420	629	1020	247	130	25	6.5	14
8	38	54	60	88	559	906	829	238	125	24	7.5	32
9	34	51	54	89	344	1360	746	216	133	23	8.0	33
10	29	52	65	89	288	1270	723	261	140	23	5.2	32
11	29	54	71	88	245	1060	720	238	157	22	2.8	33
12	30	53	72	87	196	789	672	235	145	22	3.9	32
13	32	54	76	89	170	625	655	217	130	22	4.2	31
14	30	54	123	91	150	549	618	211	118	22	4.8	32
15	38	55	685	104	135	491	595	181	108	22	7.5	32
16	44	59	281	142	125	547	584	190	95	23	14	33
17	43	54	162	234	129	821	617	181	90	25	12	34
18	46	43	127	245	140	985	525	165	85	22	13	35
19	43	36	85	180	172	1120	446	159	115	21	13	46
20	46	32	66	156	301	1290	411	144	66	22	12	40
21	48	29	68	142	308	1300	411	147	58	23	11	44
22	48	31	76	132	391	1230	387	142	50	21	13	45
23	47	41	103	96	329	1270	368	135	51	18	17	46
24	51	58	101	80	369	1310	338	141	49	17	19	44
25	52	69	104	93	471	1170	321	135	40	16	17	45
26	51	93	92	102	579	1150	448	118	39	16	24	49
27	52	118	87	91	526	1190	903	114	49	15	17	43
28	50	102	85	85	368	1250	768	110	51	15	16	37
29	52	96	88	101	---	1280	624	105	67	24	18	40
30	55	90	87	85	---	1280	504	108	57	3.0	16	43
31	57	---	74	93	---	1280	---	108	---	10	13	---
TOTAL	1234	1765	3517	3327	7808	28378	21613	6625	2787	737.0	358.4	931.2
MEAN	39.8	58.8	113	107	279	915	720	214	92.9	23.8	11.6	31.0
MAX	57	118	685	245	579	1360	1570	491	157	53	24	49
MIN	24	29	54	52	85	287	321	105	39	3.0	2.8	3.9
AC-FT	2450	3500	6980	6600	15490	56290	42870	13140	5530	1460	711	1850

CAL YR 1977 TOTAL 15686.13 MEAN 43.0 MAX 685 MIN .73 AC-FT 31110
WTR YR 1978 TOTAL 79080.60 MEAN 217 MAX 1570 MIN 2.8 AC-FT 156900

13214500 WARMSPRINGS RESERVOIR NEAR RIVERSIDE, OR

LOCATION.--Lat 43°35'05", long 118°12'30", in SW¼ sec.8, T.23 S., R.37 E., Malheur County, Hydrologic Unit 17050116, on Bureau of Reclamation lands, near right end of dam on Malheur River, 3 mi (5 km) northwest of Riverside, 4 mi (6 km) upstream from South Fork, and at mile 114.0 (183.4 km).

DRAINAGE AREA.--1,100 mi^2 (2,850 km^2), approximately.

PERIOD OF RECORD.--January 1920 to October 1929, December 1929 to current year.

GAGE.--Water-stage recorder. Prior to May 29, 1964, nonrecording gage read daily or weekly. Datum of gage is 3,327.0 ft (1,014.07 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation); gage readings have been reduced to elevations NGVD.

REMARKS.--Reservoir is formed by concrete-arch dam. Storage began in 1919. Capacity, 191,000 acre-ft (236 hm^3) between elevations 3,327.00 ft (1,014.070 m), bottom of outlet tunnel, and 3,406.00 ft (1,038.149 m), top of flashboards. Dead storage, 1,400 acre-ft (1.73 hm^3) below elevation 3,327.00 ft (1,014.070 m) not included in records. Water used to irrigate lands on both sides of river between Namorf and Ontario.

COOPERATION.--Data for computing capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 196,100 acre-ft (242 hm^3) Apr. 16, May 13, 1958, elevation, 3,407.10 ft (1,038.484 m); no contents Sept. 18 to Nov. 1, 1929, Aug. 26 to sometime in November 1935, Sept. 18 to Oct. 11, 1950, sometime in August to Oct. 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 160,400 acre-ft (198 hm^3) May 16, elevation, 3,399.07 ft (1,036.036 m); minimum, no contents Oct. 1-3.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30	3,327.00	0	-
Oct. 31	3,337.36	3,320	+3,320
Nov. 30	3,342.85	7,900	+4,580
Dec. 31	3,349.35	15,900	+8,090
CAL YR 1977	-	-	-58,840
Jan. 31	3,354.63	24,430	+8,440
Feb. 28	3,363.23	42,550	+18,120
Mar. 31	3,384.24	104,400	+61,850
Apr. 30	3,396.76	150,600	+46,200
May 31	3,397.72	137,900	+4,000
June 30	3,393.59	113,600	-16,700
July 31	3,386.95	83,020	-24,300
Aug. 31	3,377.65	a62,650	-30,580
Sept.30	-	-	-20,370
WTR YR 1978	-	-	+62,650

a Contents interpolated.

13215000 MALHEUR RIVER BELOW WARMSPRINGS RESERVOIR, NEAR RIVERSIDE, OR

LOCATION.--Lat 43°34'15", long 118°12'05", in SW¼ sec.17, T.23 S., R.37 E., Malheur County, Hydrologic Unit 17050116, on left bank 1.0 mi (1.6 km) downstream from Warmsprings Dam, 3.0 mi (4.8 km) upstream from South Fork, 4.0 mi (6.4 km) northwest of Riverside, and at mile 113.0 (181.8 km).

DRAINAGE AREA.--1,100 mi^2 (2,850 km^2), approximately.

PERIOD OF RECORD.--January 1906 to March 1907 and December 1908 (gage heights only), January 1909 to September 1910, December 1914 to July 1917, March 1919 to current year. Monthly discharge only for some periods, published in WSP 1317. Figures of discharge for January 1906 to March 1907, published in WSP 272 and 370, have been found to be unreliable and should not be used. Published as Middle Fork of Malheur River at Riverside 1906-7, as Middle Fork of Malheur River above South Fork, at Riverside 1909-10, as Malheur River above South Fork, at Riverside in WSP 370, 1906-10, and as Malheur River at Warmsprings reservoir site, near Riverside 1914-17.

REVISED RECORDS.--WSP 833: 1936. WSP 1063: 1942-45. WSP 1397: 1909-10, 1917. WSP 1447: 1955. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 3,305 ft (1,007 m), by barometer. See WSP 1317 or 1737 for history of changes prior to Sept. 29, 1949.

REMARKS.--Records good except those below 100 ft^3/s (2.83 m^3/s), which are fair. Flow completely regulated since November 1919 by Warmsprings Reservoir (see station 13214500). Diversions for irrigation above station.

AVERAGE DISCHARGE.--59 years (water years 1920-78), 176 ft^3/s (4.984 m^3/s), 127,500 acre-ft/yr (157 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 7,200 ft^3/s (204 m^3/s) Mar. 1, 1910, gage height, 10.7 ft (3.26 m), site and datum then in use, from rating curve extended above 820 ft^3/s (23.2 m^3/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 585 ft^3/s (16.6 m^3/s) Sept. 5; maximum gage height, 5.21 ft (1.588 m) Aug. 30; minimum daily discharge, 0.10 ft^3/s (0.003 m^3/s) Oct. 14 to May 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	.10	.10	.10	.10	.10	.10	.10	355	415	437	365
2	21	.10	.10	.10	.10	.10	.10	.10	355	437	442	375
3	21	.10	.10	.10	.10	.10	.10	.10	350	437	442	519
4	11	.10	.10	.10	.10	.10	.10	.10	350	420	481	580
5	1.4	.10	.10	.10	.10	.10	.10	.10	350	395	503	580
6	1.0	.10	.10	.10	.10	.10	.10	.10	360	385	503	580
7	.70	.10	.10	.10	.10	.10	.10	.10	365	385	492	497
8	.60	.10	.10	.10	.10	.10	.10	.10	390	370	492	470
9	.50	.10	.10	.10	.10	.10	.10	.10	410	355	492	448
10	.30	.10	.10	.10	.10	.10	.10	.10	410	325	475	415
11	.25	.10	.10	.10	.10	.10	.10	.10	380	310	464	395
12	.25	.10	.10	.10	.10	.10	.10	.10	350	335	464	375
13	.20	.10	.10	.10	.10	.10	.10	.10	345	390	459	345
14	.10	.10	.10	.10	.10	.10	.10	.10	345	405	459	315
15	.10	.10	.10	.10	.10	.10	.10	23	350	400	453	305
16	.10	.10	.10	.10	.10	.10	.10	144	350	400	453	310
17	.10	.10	.10	.10	.10	.10	.10	239	350	395	459	300
18	.10	.10	.10	.10	.10	.10	.10	234	355	405	459	275
19	.10	.10	.10	.10	.10	.10	.10	234	355	405	431	234
20	.10	.10	.10	.10	.10	.10	.10	234	355	426	431	221
21	.10	.10	.10	.10	.10	.10	.10	239	355	437	410	221
22	.10	.10	.10	.10	.10	.10	.10	270	360	437	437	221
23	.10	.10	.10	.10	.10	.10	.10	290	355	437	459	221
24	.10	.10	.10	.10	.10	.10	.10	325	350	437	459	221
25	.10	.10	.10	.10	.10	.10	.10	375	350	415	481	221
26	.10	.10	.10	.10	.10	.10	.10	400	340	400	503	290
27	.10	.10	.10	.10	.10	.10	.10	400	345	400	514	325
28	.10	.10	.10	.10	.10	.10	.10	355	340	420	514	325
29	.10	.10	.10	.10	---	.10	.10	345	340	426	514	310
30	.10	.10	.10	.10	---	.10	.10	350	360	420	547	300
31	.10	---	.10	.10	---	.10	---	355	---	415	459	---
TOTAL	79.00	3.00	3.10	3.10	2.80	3.10	3.00	4813.40	10725	12439	14588	10559
MEAN	2.55	.10	.10	.10	.10	.10	.10	155	358	401	471	352
MAX	21	.10	.10	.10	.10	.10	.10	400	410	437	547	580
MIN	.10	.10	.10	.10	.10	.10	.10	.10	340	310	410	221
AC-FT	157	6.0	6.1	6.1	5.6	6.1	6.0	9550	21270	24670	28940	20940

CAL YR 1977 TOTAL 43383.15 MEAN 119 MAX 607 MIN .10 AC-FT 86050
WTR YR 1978 TOTAL 53221.50 MEAN 146 MAX 580 MIN .10 AC-FT 105600

13216500 NORTH FORK MALHEUR RIVER ABOVE BEULAH RESERVOIR, NEAR BEULAH, OR

LOCATION.--Lat 43°57'01", long 118°10'28", in NW¼NE¼ sec.4, T.19 S., R.37 E., Malheur County, Hydrologic Unit 17050116, on left bank 500 ft (152 m) upstream from Beulah Reservoir, 2.5 mi (4.0 km) upstream from Warm Springs Creek, 3.5 mi (5.6 km) northwest of Beulah, and at mile 18.0 (29.0 km).

DRAINAGE AREA.--355 mi^2 (919 km^2).

PERIOD OF RECORD.--January to September 1914 (published as "at Scott's Ranch, near Beulah"), June 1936 to current year. Published as "above Agency Valley Reservoir, near Beulah", June 1936 to September 1968.

REVISED RECORDS.--WSP 1934: 1960(M).

GAGE.--Water-stage recorder. Datum of gage is 3,349.4 ft (1,020.90 m) National Geodetic Vertical Datum of 1929. Jan. 1 to Sept. 30, 1914, nonrecording gage and June 10, 1936, to Oct. 14, 1958, water-stage recorder at site 0.5 mi (0.8 km) upstream at different datums. Oct. 15, 1958, to Oct. 8, 1976, water-stage recorder at present site at datum 1.6 ft (0.49 m) higher.

REMARKS.--Records good. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--42 years (water years 1937-78), 130 ft^3/s (3.682 m^3/s), 94,180 acre-ft/yr (116 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,970 ft^3/s (112 m^3/s) Dec. 23, 1964, gage height, 9.90 ft (3.018 m), present datum, from floodmark, from rating curve extended above 1,300 ft^3/s (36.8 m^3/s) on basis of slope-area measurement of peak flow; maximum gage height, 11.0 ft (3.35 m), present datum, sometime during period Dec. 17-23, 1964 (ice jam); minimum discharge, 8.5 ft^3/s (0.24 m^3/s) Dec. 13, 1967, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s (14.2 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Feb. 7	1930	517	14.6	4.15	1.265
Mar. 8	1930	517	14.6	4.19	1.277
Apr. 1	0630	962	27.2	5.12	1.561
Apr. 27	1030	*1,020	28.9	*5.13	1.564

Minimum, 10 ft^3/s (0.28 m^3/s) Jan. 1, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	50	57	24	62	130	841	359	167	78	44	46
2	44	50	58	24	63	116	673	342	163	84	43	46
3	44	50	80	36	72	128	557	337	162	119	43	45
4	43	50	63	51	85	130	483	329	166	91	42	45
5	43	54	52	56	94	188	437	319	174	86	45	47
6	43	54	56	63	178	188	438	288	177	85	45	53
7	43	52	56	59	262	179	396	263	183	85	40	61
8	44	50	47	58	167	324	350	249	189	107	35	64
9	43	48	40	60	147	416	326	247	186	84	38	55
10	43	50	59	62	117	348	327	289	190	75	37	56
11	44	50	55	59	97	301	333	288	191	73	38	61
12	44	50	55	59	69	234	320	277	171	67	40	57
13	44	50	57	59	64	197	316	256	160	64	45	54
14	44	50	99	59	64	177	306	252	142	62	49	53
15	43	50	261	108	64	165	299	272	134	60	48	52
16	43	50	95	129	56	200	305	281	129	59	53	51
17	44	50	55	172	65	271	285	261	125	58	50	50
18	43	40	45	108	76	370	272	242	120	57	49	52
19	43	30	26	93	84	450	258	233	123	56	46	53
20	44	21	26	90	93	483	252	221	116	55	48	52
21	44	21	37	88	114	497	252	224	117	50	46	51
22	44	30	40	81	123	502	234	235	115	46	51	51
23	44	56	76	56	122	552	233	231	108	48	55	50
24	44	58	80	49	143	502	216	232	99	47	48	49
25	44	67	77	66	217	476	226	221	103	48	46	49
26	44	89	64	81	195	525	416	208	102	46	46	48
27	44	71	62	59	168	569	544	194	95	44	45	47
28	44	59	59	64	127	584	417	184	88	44	44	47
29	44	57	60	72	---	611	386	177	88	42	47	47
30	44	55	59	57	---	628	371	170	80	42	46	47
31	44	---	54	66	---	624	---	168	---	40	46	---
TOTAL	1355	1512	2010	2168	3188	11065	11069	7849	4163	2002	1398	1539
MEAN	43.7	50.4	64.8	69.9	114	357	369	253	139	64.6	45.1	51.3
MAX	45	89	261	172	262	628	841	359	191	119	55	64
MIN	43	21	26	24	56	116	216	168	80	40	35	45
AC-FT	2690	3000	3990	4300	6320	21950	21960	15570	8260	3970	2770	3050

CAL YR 1977 TOTAL 21726 MEAN 59.5 MAX 380 MIN 21 AC-FT 43090
WTR YR 1978 TOTAL 49318 MEAN 135 MAX 841 MIN 21 AC-FT 97820

NOTE.--No gage-height record Oct. 22 to Nov. 21.

13217000 BEULAH RESERVOIR AT BEULAH, OR

LOCATION.--Lat 43°54'41", long 118°09'25", in SW¼SE¼ sec.15, T.19 S., R.37 E., Malheur County, Hydrologic Unit 17050116, in control house at dam on North Fork Malheur River, 0.2 mi (0.3 km) northwest of Beulah, and at mile 15.0 (24.1 km).

DRAINAGE AREA.--440 mi^2 (1,140 km^2), approximately.

PERIOD OF RECORD.--December 1935 to current year. Prior to October 1968, published as Agency Valley Reservoir at Beulah.

REVISED RECORDS.--WSP 1397: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by earthfill, rock-faced dam. Storage began December 1935. Capacity, 59,920 acre-ft (73.9 hm^3) between elevations 3,263.21 ft (994.626 m), bottom of outlet tunnel, and 3,340.0 ft (1,018.03 m), top of spillway gates. with gates open the capacity is 32,220 acre-ft (39.7 hm^3). No dead storage. Water is used for irrigation of lands below Juntura, on Vale project of Bureau of Reclamation.

COOPERATION.--Daily elevations furnished by Vale-Oregon Irrigation District, and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 62,770 acre-ft (77.4 hm^3) May 3, 1941, elevation, 3,341.50 ft (1,018.489 m); no contents Sept. 17 to Oct. 13, 1950, Aug. 28 to Oct. 4, 1955, Aug. 13 to Oct. 1, 1961, Sept. 21 to Oct. 5, 1968, sometime Aug. 1-31 to Oct. 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 61,450 acre-ft (75.8 hm^3) Apr. 27, 28, elevation, 3,340.80 ft (1,018.276 m); no contents, Oct. 1-3.

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	-	0	-
Oct. 31	-	e2,500	+2,500
Nov. 30	-	a5,700	+3,200
Dec. 31	-	a9,890	+4,190
CAL YR 1977	-	-	-11,710
Jan. 31	3,308.15	15,180	+5,290
Feb. 28	-	a22,480	+7,300
Mar. 31	3,334.10	49,250	+26,770
Apr. 30	3,340.00	59,920	+10,670
May 31	3,335.10	51,000	-8,920
June 30	3,324.80	34,740	-16,260
July 31	3,307.70	14,780	-19,960
Aug. 31	3,284.95	2,010	-12,770
Sept. 30	3,286.60	2,490	+480
WTR YR 1978	-	-	+2,490

a Contents interpolated.
e Contents estimated on basis of inflow-outflow.

13217500 NORTH FORK MALHEUR RIVER AT BEULAH, OR

LOCATION.--Lat 43°54'28", long 118°09'08", in NW¼NE¼ sec.22, T.19 S., R.37 E., Malheur County, Hydrologic Unit 17050116, on left bank at Beulah, 0.3 mi (0.5 km) downstream from Agency Valley Dam, 12 mi (19 km) northwest of Juntura, and at mile 14.5 (23.3 km).

DRAINAGE AREA.--440 mi^2 (1,140 km^2), approximately.

PERIOD OF RECORD.--June 1926 to current year. Published as "near Beulah" June 1926 to September 1935.

REVISED RECORDS.--WSP 1397: 1927-32, 1934, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,261.20 ft (994.014 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 25, 1926, water-stage recorder at site 1 mi (2 km) downstream at different datum. Apr. 25, 1936, to Sept. 30, 1949, nonrecording gage at site 20 ft (6 m) downstream at datum 1.0 ft (0.3 m) higher. Oct. 1, 1949, to June 30, 1964, at present site at datum 1.0 ft (0.3 m) higher.

REMARKS.--Records good. Flow regulated since 1935 by Beulah Reservoir (see station 13217000). Diversions for irrigation above station.

AVERAGE DISCHARGE.--43 years (water years 1936-78), 140 ft^3/s (3.965 m^3/s), 101,400 acre-ft/yr (125 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,000 ft^3/s (198 m^3/s) May 7, 1942, gage height, 8.4 ft (2.56 m) from floodmark, caused by failure of gates at Agency Valley Dam, from rating curve extended above 1,100 ft^3/s (31.2 m^3/s) on basis of computation of peak flow over dam; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 905 ft^3/s (25.6 m^3/s) Apr. 28, gage height, 4.73 ft (1.442 m); minimum daily, 0.01 ft^3/s (<0.001 m^3/s) Oct. 15-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	.05	.05	.04	.11	.12	2.8	409	420	350	409	49
2	43	.05	.05	.05	.12	.12	3.4	427	416	346	406	49
3	28	.05	.04	.05	.13	.14	3.6	438	416	353	392	50
4	.14	.05	.04	.05	.12	.14	3.2	406	430	357	416	52
5	.35	.07	.05	.07	.12	.14	4.9	329	442	353	402	52
6	.22	.05	.04	.07	.13	.13	113	297	446	350	385	52
7	.18	.04	.04	.05	.14	.13	381	297	450	343	374	52
8	.09	.03	.04	.06	.14	.14	446	297	450	343	350	52
9	.06	.04	.04	.07	.14	.14	343	297	446	343	336	50
10	.10	.04	.05	.08	.13	.13	233	297	446	343	315	49
11	.06	.04	.06	.07	.14	.13	210	297	442	339	308	49
12	.03	.04	.06	.07	.14	.14	210	297	442	336	301	49
13	.02	.04	.10	.07	.14	.14	210	315	416	336	297	49
14	.02	.04	.08	.07	.14	.14	213	360	413	353	275	49
15	.01	.04	.07	.10	.14	.12	215	399	388	367	278	49
16	.01	.04	.07	.10	.14	.12	215	420	381	364	275	49
17	.01	.04	.05	.11	.14	.12	218	434	381	360	230	49
18	.01	.04	.04	.09	.16	.12	218	434	399	357	213	49
19	.01	.03	.04	.10	.14	.20	218	438	399	367	208	49
20	.01	.03	.04	.10	.14	.36	218	442	374	395	203	49
21	.01	.03	.03	.10	.14	.64	218	442	374	402	157	49
22	.01	.05	.04	.10	.14	.72	218	442	374	406	100	49
23	.01	.05	.05	.09	.14	1.0	220	442	381	409	100	49
24	.01	.08	.06	.09	.13	1.5	225	442	395	406	98	49
25	.01	.09	.06	.10	.13	1.8	210	442	392	402	96	49
26	.01	.08	.04	.11	.13	1.8	208	442	392	399	94	49
27	.02	.07	.05	.11	.13	1.9	350	442	371	434	63	49
28	.03	.05	.05	.11	.13	1.9	885	442	353	430	47	49
29	.05	.05	.05	.11	---	1.9	880	442	350	420	47	49
30	.06	.05	.06	.11	---	2.2	628	438	350	416	48	49
31	.05	---	.05	.11	---	2.4	---	442	---	413	48	---
TOTAL	117.60	1.45	1.59	2.61	3.77	20.68	7720.9	12188	12129	11592	7271	1487
MEAN	3.79	.048	.051	.084	.13	.67	257	393	404	374	235	49.6
MAX	45	.09	.10	.11	.16	2.4	885	442	450	434	416	52
MIN	.01	.03	.03	.04	.11	.12	2.8	297	350	336	47	49
AC-FT	233	2.9	3.2	5.2	7.5	41	15310	24170	24060	22990	14420	2950

CAL YR 1977 TOTAL 26071.06 MEAN 71.4 MAX 286 MIN .01 AC-FT 51710
WTR YR 1978 TOTAL 52535.60 MEAN 144 MAX 885 MIN .01 AC-FT 104200

13220000 MALHEUR RIVER AT LITTLE VALLEY, NEAR HOPE, OR

LOCATION.--Lat 43°53'58", long 117°30'25", in SE¼SE¼ sec.24, T.19 S., R.42 E., Malheur County, Hydrologic Unit 17050117, on right bank 500 ft (152 m) downstream from highway bridge at Little Valley, 8 mi (13 km) southwest of Hope, 14 mi (23 km) southwest of Vale, and at mile 45.6 (73.4 km).

DRAINAGE AREA.--3,010 mi^2 (7,800 km^2), approximately.

PERIOD OF RECORD.--April 1949 to current year.

REVISED RECORDS.--WSP 1217: 1949(M), 1950(M). WSP 1397: 1950. WSP 1737: 1952(M).

GAGE.--Water-stage recorder. Datum of gage is 2,424.03 ft (738.844 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Warmsprings and Beulah Reservoirs (see stations 13214500 and 13217000). Vale-Oregon Canal diverted 156,000 acre-ft (192 hm^3) above station at Namorf in sec.31, T.20 S., R.41 E., for supplying Bully Creek Reservoir and for irrigation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--29 years, 193 ft^3/s (5.466 m^3/s), 139,800 acre-ft/yr (172 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,300 ft^3/s (348 m^3/s) Feb. 24, 1957, gage height, 11.5 ft (3.51 m), from floodmark, from rating curve extended above 5,500 ft^3/s (156 m^3/s) on basis of slope-area measurement of peak flow; minimum, 1.6 ft^3/s (0.045 m^3/s) Dec. 21, 1977, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--The two greatest floods occurred March 1894 and March 1910, on basis of records for former station near Namorf.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,540 ft^3/s (129 m^3/s) Apr. 27, gage height, 8.08 ft (2.463 m); minimum, 1.6 ft^3/s (0.045 m^3/s) Dec. 21, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	28	9.8	9.8	27	215	128	785	200	150	226	130
2	59	16	10	11	26	185	130	565	178	185	212	65
3	60	16	9.8	11	28	165	138	445	180	236	222	56
4	63	15	9.2	17	27	155	178	423	178	299	212	69
5	66	15	8.6	53	41	160	140	352	173	278	264	150
6	62	14	8.6	54	133	368	126	264	160	275	282	183
7	55	13	9.2	55	299	405	162	215	155	257	268	206
8	46	13	8.6	56	635	427	454	191	178	264	264	197
9	38	13	8.6	60	441	640	520	168	219	254	257	170
10	36	13	8.6	68	348	565	427	140	240	233	247	185
11	32	13	9.2	68	264	445	332	108	257	197	219	188
12	32	13	9.8	84	206	352	299	78	240	165	212	178
13	31	13	9.2	90	165	285	241	59	240	160	222	163
14	31	13	9.8	89	155	229	125	54	240	175	229	165
15	31	13	17	128	148	188	100	50	240	206	206	153
16	31	12	12	180	138	170	106	52	233	209	197	140
17	30	12	13	278	128	188	108	55	219	200	197	145
18	29	12	11	317	121	233	100	154	219	183	185	145
19	30	12	9.8	282	114	278	100	155	243	168	178	135
20	32	10	8.6	150	128	320	98	148	222	170	165	112
21	33	10	11	126	197	313	98	143	200	206	148	98
22	32	15	11	106	240	292	96	195	194	233	128	92
23	32	14	11	82	257	271	90	128	175	236	82	96
24	35	16	11	59	250	271	89	580	163	240	78	90
25	35	16	11	46	271	247	85	145	180	219	75	90
26	35	13	11	37	384	222	104	191	180	203	80	87
27	35	12	11	33	340	194	1800	206	170	183	102	85
28	35	11	11	32	268	173	1880	203	180	191	117	106
29	35	11	11	30	---	158	1440	173	173	222	112	108
30	35	10	11	28	---	140	1130	175	158	236	102	102
31	36	---	11	27	---	128	---	188	---	236	126	---
TOTAL	1231	407	321.4	2666.8	5779	8382	10824	6788	5987	6669	5614	3889
MEAN	39.7	13.6	10.4	86.0	206	270	361	219	200	215	181	130
MAX	66	28	17	317	635	640	1880	785	257	299	282	206
MIN	29	10	8.6	9.8	26	128	85	50	155	150	75	56
AC-FT	2440	807	637	5290	11460	16630	21470	13460	11880	13230	11140	7710

CAL YR 1977 TOTAL 21651.2 MEAN 59.3 MAX 278 MIN 7.4 AC-FT 42950
WTR YR 1978 TOTAL 58558.2 MEAN 160 MAX 1880 MIN 8.6 AC-FT 116200

13226500 BULLY CREEK AT WARMSPRINGS, NEAR VALE, OR

LOCATION.--Lat 44°01'10", long 117°27'35", in SE¼NW¼ sec.9, T.18 S., R.43 E., Malheur County, Hydrologic Unit 17050118, on left bank 400 ft (122 m) downstream from Cottonwood Creek, 4.7 mi (7.6 km) upstream from Bully Creek Dam, 11.4 mi (18.3 km) northwest of Vale, and at mile 17.2 (27.7 km).

DRAINAGE AREA.--539 mi² (1,396 km²).

PERIOD OF RECORD.--September 1903 to February 1904, February 1905 to March 1907, February 1910, January 1911 to May 1917, March 1922 to June 1923, October 1963 to current year. Monthly discharge only for some periods, published in WSP 1317. Published as "near Vale" 1903, 1907, and as "above Vale" 1904-6, 1910.

REVISED RECORDS.--WSP 1317: Drainage area (former site). WSP 1397: 1904-6, 1911, 1914, 1915.

GAGE.--Water-stage recorder. Datum of gage is 2,527.21 ft (770.294 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to July 1, 1923, nonrecording gages within 0.5 mi (0.8 km) downstream at different datums.

REMARKS.--Records good. No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--21 years (water years 1906, 1912-16, 1964-78), 42.1 ft³/s (1.192 m³/s), 30,500 acre-ft/yr (37.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,800 ft³/s (362 m³/s) Dec. 22, 1964, gage height, 8.68 ft (2.646 m), from rating curve extended above 200 ft³/s (5.66 m³/s) on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 600 ft³/s (17.0 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 15	1300	1,400	39.6	3.86	1.177	Mar. 9	0430	884	25.0	3.31	1.009
Feb. 8	0030	2,680	75.9	5.11	1.558	Apr. 27	1830	*8,350	236	*7.22a	2.201

Minimum, 0.24 ft³/s (0.007 m³/s) Oct. 1, 3.

a From outside high-water mark.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	.40	9.0	3.2	17	182	245	422	14	9.3	3.0	3.8
2	.27	.35	9.0	5.0	16	156	219	344	13	7.3	3.3	3.5
3	.27	.35	8.0	8.0	18	152	191	292	11	46	3.6	3.0
4	.30	.35	7.0	14	52	145	174	256	7.8	27	4.2	2.6
5	.35	.55	5.7	19	153	186	163	238	6.3	10	3.3	3.4
6	.40	.50	7.0	18	476	293	182	217	5.6	5.1	2.7	5.7
7	.45	.40	7.0	16	820	260	166	193	5.7	8.4	2.4	6.8
8	.50	.50	6.1	17	628	315	141	172	5.3	8.8	2.4	6.9
9	.55	.75	8.0	25	215	720	129	153	4.7	9.8	2.7	5.7
10	.65	.80	6.5	24	168	597	116	150	4.6	8.1	2.4	5.5
11	.70	.80	7.0	25	102	447	110	103	3.7	7.1	1.7	4.3
12	.80	.80	7.5	30	74	369	101	90	3.3	10	1.7	4.1
13	.95	.80	8.5	40	68	299	91	77	3.4	7.8	7.5	4.0
14	.80	.80	9.6	141	61	254	70	74	3.7	8.8	9.0	4.3
15	.95	.80	344	147	61	225	60	66	4.2	6.2	3.6	4.0
16	.95	.80	106	222	56	214	72	54	4.1	5.7	3.3	3.7
17	.80	.75	43	181	53	230	79	49	4.3	4.4	3.0	4.0
18	.80	.55	20	103	54	261	65	43	7.4	5.7	2.7	3.9
19	.75	.45	8.0	97	53	320	60	37	6.1	6.1	2.4	3.8
20	.75	.40	5.5	84	65	377	56	35	5.8	4.9	2.2	4.1
21	.75	.40	5.5	99	122	370	67	22	19	2.7	2.4	4.0
22	.75	.45	10	90	134	347	65	20	22	2.7	2.7	4.0
23	.65	3.6	13	60	134	350	64	18	17	3.6	3.0	3.9
24	.60	8.0	13	37	131	348	58	17	15	3.9	2.2	3.8
25	.55	13	11	30	176	285	55	16	13	3.6	2.2	3.6
26	.50	12	10	31	296	275	194	18	12	3.3	2.2	3.6
27	.50	11	10	25	277	271	2950	19	12	3.0	1.9	3.5
28	.45	10	10	21	200	249	1360	18	13	3.3	2.2	3.8
29	.50	9.0	8.5	20	---	239	804	16	15	3.9	2.2	4.0
30	.50	8.5	5.0	18	---	221	530	15	12	3.3	2.1	4.2
31	.45	---	3.2	16	---	210	---	14	---	2.7	2.3	---
TOTAL	18.46	87.85	731.6	1666.2	4680	9167	8637	3258	274.0	242.5	92.5	125.5
MEAN	.60	2.93	23.6	53.7	167	296	288	105	9.13	7.82	2.98	4.18
MAX	.95	13	344	222	820	720	2950	422	22	46	9.0	6.9
MIN	.27	.35	3.2	3.2	16	145	55	14	3.3	2.7	1.7	2.6
AC-FT	37	174	1450	3300	9280	18180	17130	6460	543	481	183	249

CAL YR 1977 TOTAL 1467.14 MEAN 4.02 MAX 344 MIN .00 AC-FT 2910
WTR YR 1978 TOTAL 28980.61 MEAN 79.4 MAX 2950 MIN .27 AC-FT 57480

13226800 BULLY CREEK RESERVOIR NEAR VALE, OR

LOCATION.--Lat 44°[illegible]50", long 117°23'45", in SE¼SW¼ sec.12, T.18 S., R.43 E., Malheur County, Hydrologic Unit 17050118, U.S. Bureau of Reclamation land, in control chamber at dam on Bully Creek, 8.0 mi (12.9 km) northwest of Vale, and at mile 12.5 (20.1 km).

DRAINAGE AREA.--547 mi² (1,417 km²).

PERIOD OF RECORD.--February 1963 to current year.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by earthfill, rock-faced dam. Storage began Feb. 1, 1963. Capacity, 29,980 acre-ft (37.0 hm³) between elevations 2,456.58 ft (748.766 m), outlet works, and 2,516.00 ft (766.877 m), spillway crest. Dead storage, 1,650 acre-ft (2.03 hm³) below elevation 2,456.58 ft (748.766 m). Figures given herein do not include dead storage. Water used for irrigation lands of Vale-Oregon Irrigation District. Bully Creek Reservoir feed canal diverts from Malheur River by way of Vale Oregon canal (see station 13220000).

COOPERATION.--Daily elevations furnished by Vale-Oregon Irrigation District; capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents not determined, occurred during period Apr. 4 to May 2, 1969, elevation above 2,516.00 ft (766.877 m), spillway crest; no usable contents at times in 1973, 1977, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 32,390 acre-ft (39.9 hm³) Apr. 27, elevation, 2,518.40 ft (767.608 m); no usable contents several days in October.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	-	0	-
Oct. 31	2,460.00	465	+465
Nov. 30	-	a1,400	+935
Dec. 31	-	a4,560	+3,160
CAL YR 1977	-	-	-7,700
Jan. 31	2,491.20	10,610	+6,050
Feb. 28	-	a20,700	+10,090
Mar. 31	2,512.90	27,000	+6,300
Apr. 30	2,515.20	29,200	+2,200
May 31	2,513.60	27,660	-1,540
June 30	2,508.70	23,230	-4,430
July 31	2,501.70	17,550	-5,680
Aug. 31	2,492.70	11,490	-6,060
Sept. 30	2,488.60	9,180	-2,310
WTR YR 1978	-	-	+9,180

a Contents interpolated.

13269300 NORTH FORK BURNT RIVER NEAR WHITNEY, OR

LOCATION.--Lat 44°36'00", long 118°15'10", in NE¼ sec.23, T.11 S., R.36 E., Baker County, Hydrologic Unit 17050202, Wallowa Whitman National Forest, on right bank 950 ft (290 m) upstream from Petticoat Creek, 1.0 mi (1.6 km) downstream from U.S. Bureau of Reclamation damsite, 4.5 mi (7.2 km) southeast of Whitney, and 11.5 mi (18.5 km) northwest of Unity.

DRAINAGE AREA.--110 mi^2 (285 km^2), approximately.

PERIOD OF RECORD.--June 1964 to June 1978 (discontinued as a continuous-record station; converted to a partial-record station).

GAGE.--Water-stage recorder. Altitude of gage is 4,000 ft (1,220 m), from topographic map.

REMARKS.--Records good. Some regulation from irrigation and mining operations upstream. A transmountain diversion from headwaters of Middle Fork John Day River delivers as much as 12 ft^3/s (0.34 m^3/s) to North Fork Burnt River above station.

AVERAGE DISCHARGE.--13 years (water years 1965-77), 49.8 ft^3/s (1.410 m^3/s), 36,080 acre-ft/yr (44.5 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,190 ft^3/s (33.7 m^3/s) Apr. 6, 1971, gage height, 4.31 ft (1.314 m); maximum gage height, 4.95 ft (1.509 m) Jan. 29, 1965 (ice jam); minimum discharge, 0.14 ft^3/s (0.004 m^3/s) Aug. 15, 1977, but may have been less when stage fell below inlets July 19 to Aug. 17, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft^3/s (11.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 15	0100	411	11.6	2.65	0.808	Apr. 1	0800	*899	25.5	*3.62	1.103

Minimum observed, 1.6 ft^3/s (0.045 m^3/s) Oct. 2-5, 10-12, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	3.3	14	11	18	57	777	185	36			
2	1.7	3.5	21	10	17	54	538	185	33			
3	1.6	3.3	63	13	17	53	382	179	32			
4	1.6	3.1	36	15	19	50	306	162	32			
5	1.6	3.5	26	16	20	51	270	141	28			
6	1.7	3.5	21	15	22	63	267	121	26			
7	1.7	3.3	17	14	26	73	234	112	34			
8	1.7	3.1	19	15	30	86	196	110	37			
9	1.7	2.9	29	16	31	138	190	128	33			
10	1.7	3.1	15	16	29	168	196	162	26			
11	1.7	3.1	14	15	29	143	231	165	30			
12	1.7	3.3	14	14	39	110	203	143	25			
13	1.7	3.5	15	14	33	92	199	131	24			
14	1.7	4.0	86	14	29	81	182	128	24			
15	1.7	5.3	247	15	26	74	168	128	21			
16	1.8	5.3	94	16	36	85	206	115	20			
17	1.8	4.8	61	18	28	136	168	102	24			
18	1.8	4.2	48	18	25	222	146	94	22			
19	1.8	3.6	45	18	27	318	138	88	24			
20	1.8	3.3	44	18	36	378	143	85	23			
21	1.8	3.8	44	20	45	390	136	85	24			
22	1.8	4.0	50	19	50	428	126	83	26			
23	2.0	4.8	58	19	49	449	117	73	24			
24	2.0	4.8	63	21	48	362	112	66	24			
25	2.1	6.6	51	19	58	370	126	61	24			
26	2.3	9.9	36	20	68	458	203	54	25			
27	2.1	18	29	21	66	524	254	51	23			
28	2.7	15	24	24	58	574	237	51	20			
29	2.9	14	21	21	---	589	212	48	20			
30	3.3	18	18	21	---	600	199	45	21			
31	3.5	---	15	21	---	559	---	41	---			
TOTAL	60.7	171.9	1338	527	979	7735	6862	3322	785			
MEAN	1.96	5.73	43.2	17.0	35.0	250	229	107	26.2			
MAX	3.5	18	247	24	68	600	777	185	37			
MIN	1.6	2.9	14	10	17	50	112	41	20			
AC-FT	120	341	2650	1050	1940	15340	13610	6590	1560			

CAL YR 1977 TOTAL 3430.80 MEAN 9.40 MAX 247 MIN .19 AC-FT 6800

13270800 SOUTH FORK BURNT RIVER ABOVE BARNEY CREEK, NEAR UNITY, OR

LOCATION.—Lat 44°24'23", long 118°18'02", in NW¼SE¼ sec.28, T.13 S., R.36 E., Baker County, Hydrologic Unit 17050202, Wallowa Whitman National Forest, on right bank 300 ft (91 m) upstream from Barney Creek and 6 mi (10 km) southwest of Unity.

DRAINAGE AREA.—38.5 mi^2 (99.7 km^2).

PERIOD OF RECORD.—March 1963 to current year.

GAGE.—Water-stage recorder. Datum of gage is 4,347.06 ft (1,324.984 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to July 18, 1963, nonrecording gage at site 6 ft (2 m) upstream at datum 0.16 ft (0.049 m) higher.

REMARKS.—Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.—15 years, 27.7 ft^3/s (0.784 m^3/s), 20,070 acre-ft/yr (24.7 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 186 ft^3/s (5.27 m^3/s) Apr. 29, 1965, gage height, 1.98 ft (0.604 m); maximum gage height, 3.57 ft (1.088 m) Jan. 10, 1974 (backwater from ice); minimum discharge, 11 ft^3/s (0.31 m^3/s) Feb. 12, 1978, but may have been less during period of no gage-height record Nov. 20 to Dec. 5, 1977.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 59 ft^3/s (1.67 m^3/s) Mar. 31, gage height, 1.43 ft (0.436 m); minimum, 11 ft^3/s (0.31 m^3/s) Feb. 12, but may have been less during period of no gage-height record Nov. 20 to Dec. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	19	21	15	17	19	58	37	29	22	20	19
2	19	20	22	16	17	19	51	36	29	24	19	19
3	19	19	21	18	18	19	43	36	29	23	20	19
4	19	19	20	20	18	19	38	36	29	22	20	19
5	19	19	19	19	18	20	35	34	29	22	20	20
6	19	19	20	19	18	19	34	31	29	22	20	21
7	19	19	20	19	19	19	30	31	29	23	20	23
8	19	19	19	19	18	20	29	30	29	22	20	21
9	19	18	19	19	18	20	27	32	29	21	20	21
10	19	19	19	19	18	19	27	38	29	21	20	21
11	19	19	20	19	18	20	29	42	28	21	20	21
12	19	19	19	19	16	20	29	40	27	21	20	21
13	19	19	23	19	19	20	29	39	27	20	20	21
14	19	19	25	19	18	19	29	40	26	20	20	21
15	19	19	26	19	18	19	27	42	26	20	21	20
16	19	19	23	19	17	19	28	42	26	20	21	20
17	19	19	22	19	19	20	26	39	25	20	20	21
18	19	18	20	19	19	22	26	37	25	20	20	21
19	19	17	18	19	19	26	25	37	25	20	20	21
20	19	13	16	18	19	28	25	36	24	20	20	20
21	19	15	19	18	19	29	24	37	24	20	20	20
22	19	17	20	18	19	31	24	38	24	20	21	20
23	19	18	20	16	19	34	24	39	24	20	20	20
24	19	19	20	17	19	32	24	37	24	20	20	20
25	20	26	19	18	19	32	26	35	24	20	20	20
26	19	23	19	18	19	36	30	32	23	20	20	20
27	19	20	19	17	19	40	35	31	23	20	19	20
28	19	19	19	18	19	44	37	30	23	20	19	20
29	19	19	19	18	---	47	38	30	23	20	19	20
30	19	20	19	17	---	49	38	30	22	20	20	20
31	19	---	18	18	---	53	---	29	---	20	20	---
TOTAL	590	567	623	565	513	833	945	1103	783	644	619	610
MEAN	19.0	18.9	20.1	18.2	18.3	26.9	31.5	35.6	26.1	20.8	20.0	20.3
MAX	20	26	26	20	19	53	58	42	29	24	21	23
MIN	19	13	16	15	16	19	24	29	22	20	19	19
AC-FT	1170	1120	1240	1120	1020	1650	1870	2190	1550	1280	1230	1210

CAL YR 1977 TOTAL 7355 MEAN 20.2 MAX 26 MIN 13 AC-FT 14590
WTR YR 1978 TOTAL 8395 MEAN 23.0 MAX 58 MIN 13 AC-FT 16650

13272500 UNITY RESERVOIR NEAR UNITY, OR

LOCATION.--Lat 44°30'13", long 118°10'45", in SE¼SW¼ sec.21, T.12 S., R.37 E., Baker County, Hydrologic Unit 17050202, at spillway near right end of dam on Burnt River, 4.4 mi (7.1 km) north of Unity, and at mile 63.6 (102.3 km).

DRAINAGE AREA.—305 mi^2 (800 km^2).

PERIOD OF RECORD.--March 1938 to current year.

GAGE.—Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Nov. 4, 1941, reference mark or mercury pressure gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway and outlet works, completed by Bureau of Reclamation in 1937; storage began Feb. 19, 1938. Capacity, 25,200 acre-ft (31.1 hm^3) between elevations 3,776.5 ft (1,151.08 m), bottom of outlet gates, and 3,820.0 ft (1,164.34 m), top of radial gates on spillway when closed. Dead storage, 600 acre-ft (740,000 m^3) below elevations 3,776.5 ft (1,151.08 m). Records given herein represent usable contents. Water used for irrigation in the Burnt River Irrigation District near Hereford and Bridgeport.

COOPERATION.--Data for computing capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 26,770 acre-ft (33.0 hm^3) May 21, 1971, elevation, 3,821.62 ft (1,164.830 m); no contents Sept. 5 to Oct. 4, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 25,700 acre-ft (31.7 hm^3) May 11, elevation, 3,820.52 ft (1,164.494 m); minimum observed, 1,360 acre-ft (1.7 hm^3) Oct. 1, elevation, 3,783.12 ft (1,153.095 m).

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30	3,783.08	1,340	-
Oct. 31	3,785.42	2,110	+770
Nov. 30	3,789.90	3,970	+1,860
Dec. 31	3,799.10	9,030	+5,060
CAL YR 1977	-	-	-1,450
Jan. 31	3,803.90	12,190	+3,160
Feb. 28	3,809.48	16,280	+4,090
Mar. 31	3,819.80	25,030	+8,750
Apr. 30	3,820.48	25,660	+630
May 31	3,819.48	24,740	-920
June 30	3,813.04	19,110	-5,630
July 31	3,807.38	14,690	-4,420
Aug. 31	3,798.44	8,620	-6,070
Sept.30	3,790.70	4,360	-4,260
WTR YR 1978	-	-	+3,020

† Gage read between 0700 and 0900 hrs.

13273000 BURNT RIVER NEAR HEREFORD, OR

LOCATION.--Lat 44°30'14", long 118°10'35", in SE¼ sec.21, T.12 S., R.37 E., Baker County, Hydrologic Unit 17050202, on left bank 800 ft (244 m) downstream from Unity Dam, 0.4 mi (0.6 km) upstream from Van Cleve ditch, 7 mi (11 km) west of Hereford, and at mile 63.5 (102.2 km).

DRAINAGE AREA.--309 mi^2 (800 km^2).

PERIOD OF RECORD.--March to September 1915, April to September 1916, October 1928 to current year. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.--WSP 903: 1939. WSP 1397: 1916, 1930, 1930(M).

GAGE.--Water-stage recorder. Datum of gage is 3,758.19 ft (1,145.496 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1943, to Oct. 31, 1966, water-stage recorder at site 450 ft (137 m) downstream at datum 1.44 ft (0.439 m) lower. See WSP 1317 or 1737 for history of changes prior to Oct. 1, 1943.

REMARKS.--Records good. Flow regulated since 1938 by Unity Reservoir (see sta 13272500). Diversions for irrigation above station.

AVERAGE DISCHARGE.--50 years (water years 1929-78), 83.5 ft^3/s (2.365 m^3/s), 60,500 acre-ft/yr (74.6 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,220 ft^3/s (62.9 m^3/s) Apr. 17, 1943, gage height, 8.79 ft (2.679 m), present datum, from rating curve extended above 1,300 ft^3/s (36.8 m^3/s); maximum gage height, 9.29 ft (2.832 m), present datum, Apr. 16, 1943, just before concrete control washed out; no flow at times; minimum discharge before construction of Unity Dam, 1.6 ft^3/s (0.045 m^3/s) Aug. 31, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 776 ft^3/s (22.0 m^3/s) Apr. 1, gage height, 7.21 ft (2.198 m); minimum, 0.05 ft^3/s (0.001 m^3/s) Nov. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.18	1.4	3.7	4.7	54	680	256	134	99	132	104
2	.16	.18	1.4	3.7	5.2	94	766	232	149	99	131	104
3	.18	.16	1.9	3.7	5.5	94	592	226	149	99	130	102
4	.16	.18	1.5	3.7	6.0	94	465	217	152	98	129	108
5	.16	.16	1.1	4.2	6.5	94	369	208	163	96	130	112
6	.16	.16	1.1	4.4	6.8	95	326	203	162	88	130	112
7	.16	.14	1.0	4.4	7.4	117	333	176	161	88	123	106
8	.18	.16	.94	4.4	7.7	128	318	125	159	88	118	99
9	.20	.18	1.1	4.4	7.9	128	312	112	158	88	117	101
10	.20	.14	1.1	4.2	8.2	122	304	151	158	88	123	100
11	.20	.16	1.1	4.0	8.5	132	264	210	156	85	128	99
12	.20	.16	1.0	4.2	8.5	131	248	252	156	76	126	99
13	.22	.30	.94	4.2	8.9	131	243	200	152	76	125	98
14	.22	.35	1.1	4.2	8.9	130	245	161	134	76	124	97
15	.23	.42	1.1	4.4	9.2	119	217	147	134	76	120	94
16	.22	.46	1.2	4.4	8.9	108	191	116	134	77	120	91
17	.23	.50	1.1	4.4	8.9	110	184	132	132	101	119	91
18	.23	.54	1.1	4.4	9.2	125	183	163	130	101	112	90
19	.23	.54	1.2	4.4	9.6	135	182	159	125	99	105	86
20	.23	.54	1.2	4.4	9.9	136	179	148	125	99	104	84
21	.23	.47	2.8	4.4	10	168	179	135	123	98	102	83
22	.22	.50	3.8	4.4	11	191	177	120	113	98	99	82
23	.22	.50	3.4	4.4	11	233	177	123	113	107	97	82
24	.20	.77	3.3	4.4	11	292	135	120	113	111	97	81
25	.22	.77	3.6	4.4	11	310	104	120	112	111	96	80
26	.20	.67	3.6	4.6	11	315	119	120	106	111	96	79
27	.22	.88	3.6	4.6	11	353	201	120	101	114	96	79
28	.20	1.1	3.8	4.6	11	456	235	119	101	123	102	78
29	.20	1.1	3.8	4.6	---	552	262	108	100	124	106	77
30	.18	1.1	3.8	4.6	---	572	291	106	100	124	106	77
31	.20	---	3.8	4.6	---	570	---	106	---	129	105	---
TOTAL	6.22	13.47	62.88	133.4	243.4	6289	8481	4891	4005	3047	3548	2775
MEAN	.20	.45	2.03	4.30	8.69	203	283	158	134	98.3	114	92.5
MAX	.23	1.1	3.8	4.6	11	572	766	256	163	129	132	112
MIN	.16	.14	.94	3.7	4.7	54	104	106	100	76	96	77
AC-FT	12	27	125	265	483	12470	16820	9700	7940	6040	7040	5500

CAL YR 1977 TOTAL 9980.81 MEAN 27.3 MAX 143 MIN .01 AC-FT 19800
WTR YR 1978 TOTAL 33495.37 MEAN 91.8 MAX 766 MIN .14 AC-FT 66440

13274200 BURNT RIVER NEAR BRIDGEPORT, OR

LOCATION.--Lat 44°32'27", long 117°41'10", in NW¼NW¼ sec.10, T.12 S., R.41 E., Baker County, Hydrologic Unit 17050202, on left bank 0.5 mi (0.8 km) downstream from Dark Canyon, 4.6 mi (7.4 km) upstream from Deer Creek, 5.0 mi (8.0 km) northeast of Bridgeport, and at mile 37.1 (59.7 km).

DRAINAGE AREA.--650 mi^2 (1,680 km^2), approximately.

PERIOD OF RECORD.--October 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,223.22 ft (982.437 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Records fair. Flow regulated since 1938 by Unity Reservoir (see station 13272500). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--22 years, 106 ft^3/s (3.002 m^3/s), 76,800 acre-ft/yr (94.7 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,600 ft^3/s (45.3 m^3/s) Apr. 9, 1971, gage height, 6.40 ft (1.951 m); minimum, 5.2 ft^3/s (0.15 m^3/s) Dec. 5, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 921 ft^3/s (26.1 m^3/s) Apr. 3, gage height, 4.91 ft (1.497 m); minimum daily, 7.0 ft^3/s (0.198 m^3/s) Nov. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	10	18	12	23	47	703	453	75	94	73	86
2	12	17	17	14	23	51	792	439	67	96	72	82
3	12	10	17	15	23	87	913	410	78	96	71	84
4	11	9.8	18	18	26	97	800	376	73	112	72	85
5	12	10	17	19	28	102	629	366	70	116	73	86
6	12	9.8	17	19	35	107	588	352	77	113	81	101
7	13	9.4	18	18	42	114	456	330	75	118	81	118
8	12	9.4	17	18	51	124	453	314	69	114	80	124
9	12	9.0	18	18	48	151	434	268	68	105	71	105
10	11	9.0	13	19	47	158	418	238	92	105	62	102
11	11	8.7	14	19	43	158	407	231	109	116	51	102
12	10	8.7	15	19	38	162	381	272	112	108	68	109
13	11	9.0	17	19	35	162	345	297	109	93	77	113
14	10	9.0	18	19	36	155	334	312	109	86	87	116
15	10	9.4	38	21	38	151	327	258	102	82	90	111
16	9.8	9.0	38	25	37	149	359	225	96	79	103	116
17	9.4	9.0	38	30	34	139	308	198	92	75	113	105
18	9.4	9.4	28	29	35	145	278	186	93	70	111	102
19	15	8.7	29	27	35	158	266	209	97	80	107	102
20	11	7.0	26	25	36	179	264	205	102	78	101	94
21	10	7.8	21	24	41	190	264	196	103	76	98	92
22	9.8	8.8	19	25	41	200	260	193	102	71	98	86
23	9.8	9.8	19	24	42	229	252	151	9[illegible]	69	98	85
24	9.8	10	20	23	42	254	246	139	88	68	96	81
25	10	14	21	22	44	288	236	137	93	70	92	82
26	9.8	17	20	23	50	343	211	125	96	69	92	75
27	9.8	19	21	22	52	381	357	109	97	73	90	71
28	9.8	17	20	23	49	405	447	96	96	71	82	67
29	9.8	17	19	22	---	472	498	94	92	69	81	67
30	11	17	19	20	---	594	461	91	97	72	85	67
31	10	---	16	21	---	659	---	82	---	72	97	---
TOTAL	334.2	328.7	646	652	1074	6611	12687	7352	2723	2715	2653	2816
MEAN	10.8	11.0	20.8	21.0	38.4	213	423	237	90.8	87.6	85.6	93.9
MAX	15	19	38	30	52	659	913	453	112	118	113	124
MIN	9.4	7.0	13	12	23	47	211	82	67	68	51	67
AC-FT	663	652	1280	1290	2130	13110	25160	14580	5400	5390	5260	5590

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CAL YR 1977  TOTAL   7420.9   MEAN  20.3   MAX  59   MIN 7.0   AC-FT  14720
WTR YR 1978  TOTAL  40591.9   MEAN  111    MAX 913   MIN 7.0   AC-FT  80510
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13275000 BURNT RIVER AT HUNTINGTON, OR

LOCATION.--Lat 44°21'30", long 117°16'20", in NE¼ sec.13, T.14 S., R.44 E., Baker County, Hydrologic Unit 17050202, on right bank 0.5 mi (0.8 km) northwest of Huntington and at mile 2.9 (4.7 km).

DRAINAGE AREA.--1,093 mi^2 (2,831 km^2).

PERIOD OF RECORD.--September 1928 to September 1932, October 1956 to September 1959, June 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,104.75 ft (641.528 m) National Geodetic Vertical Datum of 1929. Sept. 13, 1928, to Sept. 30, 1932, nonrecording gage at site 200 ft (61 m) upstream at different datum. Oct. 1, 1956, to Sept. 30, 1959, water-stage recorder and Oct. 1, 1959, to Aug. 20, 1962, crest-stage gage.

REMARKS.--Records good. Flow regulated since 1938 by Unity Reservoir (see station 13272500). Diversions for irrigation above station.

AVERAGE DISCHARGE.--23 years, 132 ft^3/s (3.738 m^3/s), 95,630 acre-ft/yr (118 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,220 ft^3/s (62.9 m^3/s) Dec. 22, 1964, gage height, 5.94 ft (1.811 m); maximum gage height, 6.80 ft (2.073 m) Feb. 3, 1963 (ice jam); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,880 ft^3/s (53.2 m^3/s) Apr. 28, gage height, 6.53 ft (1.990 m); minimum, 3.4 ft^3/s (0.096 m^3/s) Nov. 20, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	20	41	35	75	126	855	911	126	102	67	102
2	18	20	42	39	75	121	893	862	117	111	61	96
3	17	21	42	38	76	139	1020	793	111	116	57	92
4	17	22	41	49	76	178	1060	713	104	128	57	95
5	17	25	41	54	81	235	851	672	102	157	58	101
6	17	25	43	60	153	232	838	626	98	145	61	123
7	17	24	42	58	315	227	694	578	95	151	67	139
8	17	23	42	56	261	259	609	541	92	196	71	153
9	18	24	38	56	237	298	581	506	90	147	72	137
10	18	25	39	62	191	307	554	467	95	132	64	126
11	23	26	39	62	161	304	538	441	126	137	60	124
12	22	26	39	61	139	304	518	444	135	135	55	130
13	21	25	45	60	128	289	477	457	135	123	61	137
14	20	25	51	60	119	278	454	473	132	104	69	147
15	18	25	90	83	121	264	447	454	130	101	77	143
16	18	27	92	117	106	256	571	401	126	95	95	143
17	17	27	101	155	102	248	493	365	117	89	117	143
18	15	25	84	141	99	248	438	332	109	83	121	139
19	14	21	66	134	101	264	410	326	112	71	124	137
20	17	21	50	121	111	289	398	318	111	71	117	130
21	16	20	51	116	116	307	398	307	114	69	111	126
22	15	25	54	117	111	321	386	318	132	68	109	123
23	15	30	57	106	109	345	377	278	124	71	111	117
24	15	36	60	86	112	383	362	245	117	72	109	112
25	15	44	61	86	135	395	360	240	119	71	106	109
26	20	46	59	89	139	451	401	225	119	72	106	101
27	18	45	58	79	151	506	1290	191	109	72	104	95
28	18	46	58	80	135	535	1550	176	107	75	99	89
29	19	44	57	83	---	571	1200	155	104	71	92	90
30	20	42	58	75	---	680	1050	143	95	60	93	92
31	21	---	51	76	---	787	---	134	---	66	106	---
TOTAL	551	855	1692	2494	3735	10147	20073	13092	3403	3161	2677	3591
MEAN	17.8	28.5	54.6	80.5	133	327	669	422	113	102	86.4	120
MAX	23	46	101	155	315	787	1550	911	135	196	124	153
MIN	14	20	38	35	75	121	360	134	90	60	55	89
AC-FT	1090	1700	3360	4950	7410	20130	39810	25970	6750	6270	5310	7120

CAL YR 1977 TOTAL 9928.5 MEAN 27.2 MAX 101 MIN 4.0 AC-FT 19690
WTR YR 1978 TOTAL 65471.0 MEAN 179 MAX 1550 MIN 14 AC-FT 129900

13275300 POWDER RIVER NEAR SUMPTER, OR

LOCATION.--Lat 44°40'20", long 117°59'40", in NE¼NE¼ sec.25, T.10 S., R.38 E., Baker County, Hydrologic Unit 17050203, Wallowa Whitman National Forest, on left bank 1,200 ft (366 m) downstream from Mason Dam, 1.4 mi (2.3 km) upstream from California Gulch, 10.9 mi (17.4 km) southwest of Baker, and at mile 123.2 (198.2 km).

DRAINAGE AREA.--168 mi^2 (435 km^2), approximately. Prior to Oct. 1, 1970, 170 mi^2 (440 km^2) at cableway, 0.5 mi (0.8 km) downstream.

PERIOD OF RECORD.--April 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,898.47 ft (1,188.254 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to July 29, 1965, nonrecording gage at datum 1.03 ft (0.314 m) higher.

REMARKS.--Records good except those for May, which are fair. Flow completely regulated since Oct. 31, 1967, by Phillips Lake, active capacity, 90,540 acre-ft (112 hm^3). Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--13 years, 103 ft^3/s (2.917 m^3/s), 74,620 acre-ft/yr (92.0 hm^3/yr), not adjusted for storage in Phillips Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 971 ft^3/s (27.5 m^3/s) Apr. 30, 1965, gage height, 4.43 ft (1.350 m); no flow Nov. 12, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 1,600 ft^3/s (45.3 m^3/s), approximately, Mar. 20, 1910, based on comparison with records for station downstream, near Baker.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 426 ft^3/s (12.1 m^3/s) June 8, 9, gage height, 3.43 ft (1.045 m); minimum, 2.7 ft^3/s (0.076 m^3/s) May 31, from recorded range in stage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	9.0	11	8.0	9.0	9.0	10	9.5	305	129	284	145
2	10	9.0	12	8.0	8.6	9.0	10	10	305	129	284	155
3	8.6	9.4	12	8.6	8.6	10	10	10	305	129	284	181
4	8.6	9.4	11	9.2	8.6	10	10	10	305	127	256	181
5	8.6	9.4	11	9.2	8.2	11	10	10	317	127	239	170
6	8.6	8.6	12	9.2	8.2	11	10	11	365	123	239	106
7	8.6	8.6	11	9.1	8.2	11	11	11	365	102	239	91
8	8.6	8.6	11	9.1	8.2	11	11	11	381	82	211	84
9	8.6	8.6	10	9.0	7.8	11	11	60	426	45	199	45
10	8.6	8.6	9.4	9.0	7.8	11	11	60	421	46	199	45
11	8.6	8.6	8.6	9.0	7.8	10	11	100	421	46	199	40
12	9.0	8.6	7.8	8.9	7.8	8.6	11	130	345	46	220	11
13	9.0	8.6	8.2	8.9	7.8	8.6	11	130	253	54	232	8.6
14	9.0	8.6	8.6	8.8	7.8	8.6	11	130	205	100	232	6.3
15	9.0	8.6	9.4	8.8	7.8	9.0	11	130	205	98	214	6.3
16	9.0	8.6	9.4	8.7	7.8	9.0	11	130	211	106	170	6.3
17	9.0	9.0	9.4	8.7	8.2	9.0	11	130	211	148	150	6.3
18	9.0	9.0	9.4	8.6	7.8	9.0	11	150	211	148	150	6.3
19	9.0	9.0	9.4	9.0	7.8	9.4	11	170	211	145	150	6.3
20	9.4	9.0	9.4	9.4	7.5	9.0	11	170	211	145	150	6.3
21	9.4	8.6	9.4	10	7.5	9.0	11	170	211	145	153	6.3
22	9.4	8.2	10	10	7.8	9.4	11	235	205	145	153	6.3
23	9.4	8.2	9.4	9.4	7.8	9.4	11	235	181	143	148	6.3
24	9.4	8.6	9.0	10	7.8	9.4	11	290	168	143	127	6.3
25	9.4	8.2	9.0	10	7.8	9.0	11	290	141	168	127	6.3
26	9.4	8.6	9.0	10	8.6	9.0	28	355	132	223	127	5.9
27	9.4	9.4	9.0	9.4	8.6	9.0	16	370	132	242	127	5.5
28	9.4	9.0	9.0	9.4	9.0	9.0	7.8	370	132	242	129	5.5
29	9.4	11	9.0	9.4	---	9.0	7.4	370	132	242	129	5.5
30	9.0	12	9.0	9.4	---	9.4	8.4	320	129	263	134	5.2
31	9.0	---	8.2	9.4	---	9.4	---	275	---	288	145	---
TOTAL	282.4	268.6	300.0	283.6	226.2	295.2	336.6	4852.5	7542	4319	5800	1365.8
MEAN	9.11	8.95	9.68	9.15	8.08	9.52	11.2	157	251	139	187	45.5
MAX	11	12	12	10	9.0	11	28	370	426	288	284	181
MIN	8.6	8.2	7.8	8.0	7.5	8.6	7.4	9.5	129	45	127	5.2
AC-FT	560	533	595	563	449	586	668	9620	14960	8570	11500	2710

CAL YR 1977 TOTAL 25942.0 MEAN 71.1 MAX 277 MIN 7.8 AC-FT 51460
WTR YR 1978 TOTAL 25871.9 MEAN 70.9 MAX 426 MIN 5.2 AC-FT 51320

NOTE.--No gage-height record Apr. 30 to June 2.

13286700 POWDER RIVER NEAR RICHLAND, OR

LOCATION.--Lat 44°46'40", long 117°17'30", in SE¼ sec.14, T.9 S., R.44 E., Baker County, Hydrologic Unit 17050203, on left bank 0.4 mi (0.6 km) upstream from Upper Timber Canyon, 6.0 mi (9.7 km) west of Richland, and at mile 20.3 (32.7 km).

DRAINAGE AREA.--1,310 mi^2 (3,390 km^2), approximately.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,277.42 ft (694.158 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Regulation by several reservoirs, the largest being Phillips Lake since Oct. 31, 1967, active capacity, 90,540 acre-ft (112 hm^3), and Thief Valley Reservoir, capacity, 17,400 acre-ft (21.5 hm^3). Diversions for irrigation above and below station.

AVERAGE DISCHARGE.--21 years, 247 ft^3/s (6.995 m^3/s), 179,000 acre-ft/yr (221 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,470 ft^3/s (98.3 m^3/s) Jan. 31, 1965, gage height, 6.68 ft (2.036 m); maximum gage height, 9.29 ft (2.832 m) Jan. 15, 1974 (ice jam); minimum discharge, 0.80 ft^3/s (0.023 m^3/s) Aug. 11, 12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,490 ft^3/s (42.2 m^3/s) Apr. 28, gage height, 4.29 ft (1.308 m); minimum, 13 ft^3/s (0.368 m^3/s) Aug. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	21	36	50	223	333	694	1170	220	146	38	72
2	21	19	55	47	226	306	801	1019	220	149	40	67
3	19	17	88	50	240	284	712	870	243	192	39	67
4	19	17	82	80	258	287	639	776	280	240	38	75
5	19	17	64	120	284	374	622	655	333	220	47	74
6	18	17	55	186	467	526	700	578	357	183	25	97
7	18	17	52	201	562	467	826	506	449	166	20	121
8	19	17	47	195	650	467	729	458	449	151	21	144
9	17	17	49	230	578	526	639	353	391	132	31	123
10	17	17	42	317	536	531	583	365	361	156	33	117
11	16	17	40	317	458	506	567	458	317	151	33	113
12	16	17	42	287	387	486	531	462	298	123	32	119
13	15	19	90	276	337	435	506	404	329	90	35	117
14	16	18	186	291	317	404	458	391	361	77	55	113
15	15	19	387	396	321	361	426	413	345	64	74	119
16	15	19	226	526	306	337	556	444	309	49	81	115
17	15	19	146	633	287	329	594	422	247	43	67	117
18	15	18	119	536	276	333	506	370	207	38	59	119
19	15	17	101	477	272	353	453	313	177	35	56	119
20	15	16	128	458	291	404	431	291	149	36	61	119
21	15	20	151	391	302	426	409	291	161	45	72	119
22	15	27	207	396	298	449	396	302	172	55	64	105
23	16	40	161	333	294	481	374	337	186	53	70	107
24	16	45	101	291	294	506	337	365	204	53	72	103
25	16	59	67	261	337	486	321	306	236	50	70	105
26	17	53	65	247	341	481	365	258	226	40	69	103
27	17	44	65	243	374	506	1020	226	210	45	74	103
28	17	39	64	233	353	541	1340	216	183	40	92	105
29	17	39	59	240	---	562	1220	223	156	39	67	105
30	17	38	62	233	---	594	1230	243	144	40	64	105
31	17	---	58	226	---	610	---	243	---	48	70	---
TOTAL	523	759	3095	8767	9869	13691	18985	13719	7920	2949	1659	3187
MEAN	16.9	25.3	99.8	283	352	442	633	443	264	95.1	53.5	106
MAX	23	59	387	633	650	610	1340	1170	449	240	82	144
MIN	15	16	36	47	223	284	321	216	144	35	20	67
AC-FT	1040	1510	6140	17390	19580	27160	37660	27210	15710	5850	3290	6320

CAL YR 1977 TOTAL 17097.8 MEAN 46.8 MAX 387 MIN 2.0 AC-FT 33910
WTR YR 1978 TOTAL 85123.0 MEAN 233 MAX 1340 MIN 15 AC-FT 168800

13288200 EAGLE CREEK ABOVE SKULL CREEK, NEAR NEW BRIDGE, OR

LOCATION.--Lat 44°52'50", long 117°15'10", in SE¼ sec.7, T.8 S., R.45 E., Baker County, Hydrologic Unit 17050203, Wallowa-Whitman National Forest, on left bank 0.5 mi (0.8 km) upstream from Skull Creek, 6.5 mi (10.5 km) northwest of New Bridge, and at mile 10.5 (16.9 km).

DRAINAGE AREA.--156 mi^2 (404 km^2).

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,800 ft (853 m), from topographic map.

REMARKS.--Records good. No regulation. Some diversions above station for irrigation and one small interbasin diversion for irrigation supply. All diversions are small compared to flow at station during irrigation season.

AVERAGE DISCHARGE.--21 years, 325 ft^3/s (9.204 m^3/s), 235,500 acre-ft/yr (290 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,310 ft^3/s (150 m^3/s) July 12, 1975, gage height, 5.06 ft (1.542 m), from rating curve extended above 2,500 ft^3/s (70.8 m^3/s) on basis of slope-area measurement of peak flow; maximum gage height, 6.88 ft (2.097 m) Jan. 25, 1962 (ice jam); minimum daily discharge, 30 ft^3/s (0.85 m^3/s) Nov. 28, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,700 ft^3/s (48.1 m^3/s) and maximum discharge, 1,920 ft^3/s (54.4 m^3/s) June 5, gage height, 3.54 ft (1.079 m); minimum, 53 ft^3/s (1.50 m^3/s) Nov. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	99	137	88	107	127	868	779	885	1100	297	150
2	132	97	286	84	107	124	876	802	993	1000	282	147
3	122	87	310	96	109	124	734	842	1210	929	266	145
4	115	91	227	110	107	132	656	834	1450	902	252	142
5	109	115	201	120	109	145	602	779	1600	850	241	150
6	104	100	191	115	153	147	558	734	1630	826	227	220
7	109	97	176	115	170	150	529	705	1540	885	217	194
8	104	91	164	110	176	204	500	705	1480	993	207	207
9	100	91	156	110	170	266	478	757	1530	938	194	188
10	97	91	156	115	158	270	467	694	1380	1060	188	297
11	95	89	153	119	150	255	494	876	1040	929	182	263
12	91	91	147	117	139	237	506	810	947	795	176	237
13	89	93	179	115	134	217	494	772	938	757	191	217
14	87	95	286	117	129	201	489	859	947	764	197	204
15	84	102	380	129	129	182	472	965	868	787	185	194
16	82	102	270	145	113	179	506	956	826	764	227	182
17	82	89	210	164	115	188	500	876	795	677	197	176
18	80	80	180	161	117	210	478	859	911	616	185	170
19	78	77	170	156	113	248	467	876	894	571	173	164
20	75	67	170	145	115	314	467	947	1010	517	167	158
21	75	72	190	139	117	339	445	1100	1060	494	158	153
22	73	95	200	139	117	375	430	1210	1060	472	156	147
23	75	104	190	119	117	435	404	1060	1130	461	158	142
24	77	111	160	119	119	440	394	920	1130	445	150	137
25	93	139	150	129	129	409	435	810	965	440	145	134
26	109	210	140	124	134	419	546	727	826	430	142	132
27	91	158	135	109	134	478	818	691	876	409	137	127
28	89	142	130	115	132	565	842	757	1060	394	134	127
29	102	153	125	115	---	636	810	859	1150	366	134	124
30	104	139	120	104	---	727	787	850	1200	339	134	122
31	97	---	110	111	---	742	---	826	---	318	147	---
TOTAL	2967	3167	5799	3754	3619	9485	17052	26437	33331	21228	5846	5150
MEAN	95.7	106	187	121	129	306	568	853	1111	685	189	172
MAX	147	210	380	164	176	742	876	1210	1630	1100	297	297
MIN	73	67	110	84	107	124	394	691	795	318	134	122
AC-FT	5890	6280	11500	7450	7180	18810	33820	52440	66110	42110	11600	10220

CAL YR 1977 TOTAL 47685 MEAN 131 MAX 642 MIN 45 AC-FT 94580
WTR YR 1978 TOTAL 137835 MEAN 378 MAX 1630 MIN 67 AC-FT 273400

13292000 IMNAHA RIVER AT IMNAHA, OR

LOCATION.--Lat 45°33'45", long 116°50'00", in SW¼ sec.16, T.1 N., R.48 E., Wallowa County, Hydrologic Unit 17060102, on left bank at Imnaha, 0.3 mi (0.5 km) downstream from Big Sheep Creek, and at mile 19.3 (31.1 km).

DRAINAGE AREA.--622 mi^2 (1,611 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1928 to current year.

REVISED RECORDS.--WSP 833: 1938. WSP 1397: 1929, 1932(M), 1949. WSP 1737: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,941.14 ft (591.659 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 6, 1934, nonrecording gage at site 0.25 mi (0.40 km) upstream at different datum. Aug. 6-31, 1934, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good. No regulation. Diversions for irrigation above station. Water is diverted from Big Sheep Creek and tributaries above station for irrigation in Wallowa River basin.

AVERAGE DISCHARGE.--50 years, 513 ft^3/s (14.53 m^3/s), 371,700 acre-ft/yr (458 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft^3/s (286 m^3/s) Jan. 17, 1974, gage height, 7.86 ft (2.396 m), from rating curve extended above 3,500 ft^3/s (99.1 m^3/s); minimum observed, 16 ft^3/s (0.45 m^3/s) Nov. 22, 1931, result of freezeup; minimum daily, 25 ft^3/s (0.71 m^3/s) Nov. 22, 23, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft^3/s (45.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 1	1330	2,170	61.5	4.46	1.359	Apr. 27	1630	*6,830	193	*7.61	2.320

Minimum, 54 ft^3/s (1.53 m^3/s) Nov. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SFP
1	183	148	185	175	204	384	2050	2550	1120	1260	415	197
2	165	148	204	170	199	356	1890	2290	1160	1160	390	188
3	153	146	296	200	199	364	1510	2160	1290	1180	369	182
4	146	141	279	234	193	356	1310	1920	1460	1360	348	176
5	141	173	266	240	196	352	1170	1670	1660	1240	338	176
6	139	199	259	213	276	344	1140	1460	1800	1110	328	323
7	158	176	253	216	372	344	1080	1330	1790	1170	309	309
8	148	173	237	213	446	405	1060	1270	1760	1490	291	333
9	141	160	216	213	437	578	1150	1330	1800	1330	273	278
10	136	160	234	222	401	634	1250	1570	1730	1400	269	401
11	132	158	225	222	380	622	1400	1670	1420	1260	261	407
12	129	155	231	216	344	600	1320	1520	1280	1100	258	333
13	134	155	249	213	322	541	1200	1460	1270	1010	309	304
14	134	160	333	216	307	495	1110	1620	1290	1010	338	291
15	132	158	606	228	296	442	1040	1880	1180	1020	286	273
16	129	160	562	246	279	423	1150	1740	1100	1010	353	261
17	127	151	485	289	256	432	1100	1530	1010	900	291	261
18	127	125	423	307	262	525	1050	1410	1080	826	269	278
19	125	106	364	304	266	634	1020	1370	1030	775	254	261
20	125	89	276	289	266	748	1070	1410	1100	724	247	258
21	123	65	286	279	289	799	1030	1490	1160	693	240	250
22	123	80	333	276	329	880	986	1650	1140	657	240	243
23	118	120	311	253	360	1010	957	1510	1210	633	243	233
24	121	158	296	204	376	1110	929	1410	1260	604	229	223
25	134	163	269	256	384	979	965	1270	1220	588	223	216
26	188	231	253	246	388	1000	1320	1160	1050	571	226	209
27	155	225	231	222	401	1200	5880	1080	1040	544	219	206
28	143	199	193	222	388	1350	4910	1130	1170	549	209	206
29	143	188	249	216	---	1430	3420	1210	1300	518	203	203
30	158	180	240	202	---	1620	2860	1170	1290	471	200	197
31	155	---	219	213	---	1630	---	1130	---	430	203	---
TOTAL	4365	4652	9063	7215	8816	22587	48327	47370	39170	28593	8631	7676
MEAN	141	155	292	233	315	729	1611	1528	1306	922	278	256
MAX	188	231	606	307	446	1630	5880	2550	1800	1490	415	407
MIN	118	65	185	170	193	344	929	1080	1010	430	200	176
AC-FT	8660	9230	17980	14310	17490	44800	95860	93960	77690	56710	17120	15230

CAL YR 1977 TOTAL 74253 MEAN 203 MAX 812 MIN 65 AC-FT 147300
WTR YR 1978 TOTAL 236465 MEAN 648 MAX 5880 MIN 65 AC-FT 469000

13292000 IMNAHA RIVER AT IMNAHA, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1965 to September 1968, May 1976 to December 1977 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 27.0°C July 23, 1977; minimum, 0.0°C on many days during winter periods each year.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 13.5°C Oct. 16; minimum, 0.0°C Nov. 18-23.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.5	6.5	7.0	6.0	3.5	2.0						
2	12.0	7.0	7.0	4.5	5.5	3.5						
3	12.5	8.0	5.0	2.5	5.0	4.5						
4	11.0	6.5	6.0	3.5	4.5	3.0						
5	10.0	6.5	7.5	5.5	3.0	2.0						
6	11.0	8.0	7.5	6.0	4.5	2.5						
7	10.0	9.0	7.0	4.5	4.5	1.5						
8	11.0	7.5	5.0	3.0	2.0	1.0						
9	11.0	9.5	4.5	2.5	2.5	0.5						
10	10.5	6.5	6.5	3.5	4.0	2.5						
11	10.0	5.5	6.0	4.5	5.5	4.5						
12	11.0	6.0	7.0	5.0	5.0	4.0						
13	11.5	8.5	7.0	5.0	6.0	5.0						
14	12.0	7.5	6.0	4.0	6.5	5.0						
15	12.0	7.5	7.0	5.5	---	---						
16	13.5	9.0	6.0	4.0	---	---						
17	12.0	7.5	3.5	1.5	---	---						
18	11.5	7.0	1.5	0.0	---	---						
19	12.5	9.0	0.5	0.0	---	---						
20	11.0	7.0	0.5	0.0	---	---						
21	10.5	7.0	0.0	0.0	---	---						
22	10.0	6.0	0.0	0.0	---	---						
23	10.5	8.0	1.0	0.0	---	---						
24	12.5	7.5	2.0	1.0	---	---						
25	11.5	10.0	6.0	2.0	---	---						
26	10.5	8.5	6.0	3.5	---	---						
27	9.0	7.5	4.0	3.0	---	---						
28	8.5	6.5	5.5	4.0	---	---						
29	9.5	8.0	6.5	4.0	---	---						
30	8.5	7.0	4.0	2.0	---	---						
31	7.5	6.0	---	---	---	---						
MONTH	13.5	5.5	7.5	0.0	6.5	0.5						

GRANDE RONDE RIVER BASIN

13318050 MEADOW CREEK BELOW SMITH CREEK, NEAR STARKEY, OR

LOCATION.--Lat 45°17'29", long 118°36'12", in SE¼NW¼ sec.19, T.3 S., R.34 E., Union County, Hydrologic Unit 17060104, in Starkey Experimental Forest, on left bank 10 ft (3 m) downstream from bridge, 25 ft (8 m) downstream from Smith Creek, 8.5 mi (13.7 km) northwest of Starkey, and 24 mi (39 km) west of LaGrande.

DRAINAGE AREA.--33.2 mi^2 (86.0 km^2).

PERIOD OF RECORD.--July 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,060 ft (1,237 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 264 ft^3/s (7.48 m^3/s) Dec. 13, 1977, gage height, 3.86 ft (1.177 m), maximum gage height 4.12 ft (1.256 m) backwater from ice; minimum, 0.42 ft^3/s (0.012 m^3/s) Aug. 18, 20, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 170 ft^3/s (4.81 m^3/s) and maximum (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft^3/s)	(m^3/s)	(ft)	(m)			(ft^3/s)	(m^3/s)	(ft)	(m)
Nov. 26	0130	175	4.96	3.48	1.061	Dec. 21	0130	ice jam		*4.12	1.256
Dec. 13	2000	*264	7.48	3.86	1.177	Mar. 22	2100	183	5.18	3.53	1.076

Minimum, 0.60 ft^3/s (0.017 m^3/s) Aug. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	4.5	46	10	24	64	147	52	11	7.5	1.1	1.3
2	4.0	5.3	87	11	23	57	140	46	10	9.0	1.1	1.3
3	3.5	4.9	129	21	22	54	120	41	9.4	7.2	1.1	1.2
4	3.3	5.0	87	24	21	44	106	37	9.0	6.5	1.0	1.1
5	3.3	5.0	61	25	23	42	96	36	8.2	5.6	1.0	1.2
6	3.1	4.8	53	23	30	42	93	32	7.5	5.0	.91	1.9
7	4.5	5.0	47	22	39	43	87	28	7.2	4.8	.91	2.7
8	4.2	4.8	39	21	45	71	77	25	6.5	4.5	.91	2.9
9	3.8	4.2	37	22	46	145	69	26	6.5	3.8	.82	2.0
10	3.3	4.0	32	23	42	140	61	28	7.5	3.5	.74	2.5
11	3.1	4.0	32	23	40	116	56	26	8.2	3.3	.82	2.2
12	3.3	3.8	32	24	37	94	50	24	6.8	3.1	.91	2.0
13	3.1	4.8	136	26	39	77	45	25	7.5	2.9	1.3	1.9
14	3.1	4.5	234	27	35	66	42	24	7.5	2.7	1.5	1.9
15	2.9	6.2	205	29	32	59	40	32	7.2	2.5	2.0	1.7
16	2.9	6.8	140	32	32	56	46	32	6.5	2.5	2.7	1.6
17	2.7	8.4	104	36	33	71	45	30	5.9	2.4	2.0	1.7
18	2.7	8.0	77	38	32	109	53	29	5.3	2.2	1.7	2.2
19	2.5	8.4	63	37	28	138	57	27	4.8	2.2	1.5	1.9
20	2.5	6.2	38	36	30	153	58	25	4.5	2.0	1.5	1.7
21	2.5	7.0	42	37	35	155	57	24	4.5	1.9	1.6	1.6
22	2.4	8.5	39	36	40	165	55	22	4.5	1.7	1.7	1.6
23	2.4	10	36	34	52	169	55	20	4.2	1.7	2.0	1.6
24	2.4	17	40	27	58	151	51	19	4.8	1.6	1.6	1.5
25	4.2	35	35	30	80	145	48	19	5.6	1.5	1.6	1.5
26	4.2	102	34	32	88	147	52	18	4.8	1.5	1.6	1.3
27	3.5	61	32	23	80	147	59	17	4.2	1.5	1.5	1.3
28	3.3	52	31	27	73	136	68	16	4.5	1.3	1.3	1.3
29	3.5	55	29	25	---	122	65	14	6.2	1.3	1.2	1.3
30	3.8	55	27	24	---	107	59	13	5.3	1.2	1.3	1.3
31	3.8	---	25	23	---	96	---	12	---	1.2	1.5	---
TOTAL	102.3	511.1	2049	828	1159	3181	2057	819	195.6	99.6	42.42	51.2
MEAN	3.30	17.0	66.1	26.7	41.4	103	68.6	26.4	6.52	3.21	1.37	1.71
MAX	4.5	102	234	38	88	169	147	52	11	9.0	2.7	2.9
MIN	2.4	3.8	25	10	21	42	40	12	4.2	1.2	.74	1.1
CFSM	.10	.51	1.99	.80	1.25	3.10	2.07	.80	.20	.10	.04	.05
IN.	.11	.57	2.30	.93	1.30	3.56	2.30	.92	.22	.11	.05	.06
AC-FT	203	1010	4060	1640	2300	6310	4080	1620	388	198	84	102

WTR YR 1978 TOTAL 11095.22 MEAN 30.4 MAX 234 MIN .74 CFSM .92 IN 12.43 AC-FT 22010

NO
NOTE.--No gage-height record Jan. 1 to Feb. 27.

13318050 MEADOW CREEK BELOW SMITH CREEK, NEAR STARKEY, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1977 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum 24.5°C July 23, 25, Aug. 3, 9, 1978; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 24.5°C July 23, 25, Aug. 3, 9; minimum, 0.0°C on many days during winter periods.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1									---	---	16.5	5.0
2									---	---	16.5	7.0
3									---	---	18.0	10.5
4									---	---	20.0	11.5
5									---	---	21.0	13.0
6									---	---	20.5	9.5
7									---	---	19.0	8.5
8									---	---	17.5	7.0
9									---	---	17.0	5.0
10									---	---	17.0	5.5
11									---	---	17.0	6.0
12									---	---	17.0	5.5
13									---	---	17.5	5.0
14									---	---	15.0	7.0
15									---	---	14.5	6.5
16									---	---	10.5	7.0
17									---	---	12.5	4.0
18									---	---	13.5	8.0
19									---	---	13.0	8.5
20									---	---	11.0	8.0
21									---	---	9.0	6.0
22									---	---	10.0	5.0
23									---	---	6.5	3.5
24									---	---	10.0	5.5
25									---	---	10.5	6.0
26									13.5	---	11.5	5.0
27									14.5	8.5	10.0	5.5
28									15.5	9.0	9.0	7.5
29									12.5	10.0	8.5	7.0
30									11.5	8.5	8.5	6.0
31									11.5	6.5	---	---
MONTH									15.5	6.5	21.0	3.5

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.5	3.5	5.0	2.5	3.0	.5	.0	.0	1.0	.5	1.5	.0
2	9.0	3.0	4.5	.5	3.5	2.0	.0	.0	1.5	.5	1.0	.0
3	8.0	2.5	2.0	.0	3.5	2.5	.0	.0	2.5	1.0	1.0	.0
4	8.0	1.5	1.5	.0	3.0	1.5	.0	.0	2.0	.5	2.5	1.0
5	7.5	2.5	4.5	1.0	2.0	1.5	.0	.0	2.5	1.0	3.0	1.0
6	8.0	3.0	4.5	2.5	4.0	2.0	.0	.0	1.5	.5	4.5	1.0
7	7.0	4.5	3.0	.5	3.0	.5	.0	.0	2.0	1.0	4.0	1.5
8	8.5	3.0	2.0	.0	1.0	.0	.5	.0	1.5	.0	3.5	1.0
9	9.0	5.0	3.5	.5	1.5	.0	.5	.0	2.0	.0	3.0	1.0
10	8.5	3.5	3.0	.5	3.0	1.5	1.0	.5	.0	.0	4.0	.5
11	8.0	1.5	3.5	.5	3.5	2.0	1.0	.5	1.0	.0	3.0	.5
12	8.5	1.5	3.5	.5	2.5	1.0	2.0	1.0	.0	.0	2.5	.0
13	9.5	3.5	3.5	1.0	2.5	1.0	2.0	1.0	.5	.0	2.5	.0
14	9.5	3.0	3.0	1.0	4.0	2.5	2.5	1.0	.0	.0	4.0	.0
15	9.5	2.0	3.5	1.5	3.5	1.5	2.0	1.0	1.0	.0	3.5	.0
16	9.5	3.5	2.0	.0	2.5	1.0	2.0	1.0	1.0	.0	5.5	.0
17	9.0	3.0	.0	.0	2.0	1.0	2.0	.5	.0	.0	6.0	.5
18	9.0	2.0	.0	.0	2.0	.5	2.0	1.0	1.0	.0	6.0	.5
19	8.0	3.5	.0	.0	.5	.0	2.5	1.5	3.5	1.0	5.5	1.5
20	7.5	1.0	.0	.0	.0	.0	3.0	1.5	3.0	.5	6.0	1.0
21	7.0	1.5	.0	.0	.0	.0	1.5	.5	3.0	.0	6.5	1.0
22	6.5	.5	.0	.0	.0	.0	1.0	.5	3.0	.5	7.0	1.5
23	6.5	3.0	.0	.0	.0	.0	.0	.0	2.5	.5	4.0	1.5
24	8.5	2.0	.0	.0	1.0	.0	.0	.0	2.0	1.5	5.5	1.0
25	7.0	5.0	.0	.0	2.5	1.0	.0	.0	2.5	1.0	7.0	2.5
26	6.5	3.0	.0	.0	2.0	1.5	.5	.0	2.5	1.0	8.0	2.5
27	4.5	2.5	1.5	.0	1.5	1.0	.0	.0	2.5	.5	8.5	2.5
28	6.5	3.5	2.5	1.5	1.0	.0	.5	.0	2.5	.0	8.0	2.5
29	7.0	4.0	3.5	1.5	1.5	.5	1.5	.5	---	---	7.5	3.0
30	5.5	3.5	2.0	.5	1.5	.0	1.5	.5	---	---	6.5	4.0
31	5.0	2.5	---	---	.0	.0	1.5	---	---	---	8.0	4.0
MONTH	9.5	.5	5.0	.0	4.0	.0	3.0	.0	3.5	.0	8.5	.0

13318050 MEADOW CREEK BELOW SMITH CREEK, NEAR STARKEY, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.5	3.0	10.5	3.5	16.0	5.0	15.5	10.5	23.0	9.0	19.5	9.5
2	5.5	2.5	9.5	3.5	17.5	6.5	13.0	10.0	23.5	9.5	19.0	9.0
3	6.5	2.5	10.0	3.5	18.5	7.5	11.0	10.0	24.5	10.5	19.5	8.5
4	3.5	2.0	5.5	2.5	19.5	8.5	12.5	9.5	23.5	12.0	18.0	8.0
5	5.5	1.5	6.0	2.5	19.0	9.0	17.0	10.0	24.0	12.5	13.5	9.0
6	4.0	2.5	11.5	3.5	19.5	10.0	19.5	9.5	23.5	9.5	13.5	10.5
7	4.0	2.5	12.0	3.5	18.0	9.5	15.5	11.0	24.0	10.0	11.0	8.5
8	7.0	1.5	13.0	4.0	19.5	8.0	20.0	11.0	24.0	10.0	13.0	6.5
9	8.5	1.5	9.0	6.0	16.0	10.5	20.5	10.0	24.5	11.5	13.0	7.5
10	10.0	2.5	9.5	6.0	12.0	9.5	19.5	11.5	22.5	10.0	13.0	8.0
11	8.0	3.0	9.0	5.0	15.5	8.0	17.5	8.5	21.5	9.5	11.5	7.0
12	8.0	1.0	9.0	4.0	12.5	9.0	20.0	7.5	15.0	10.5	13.0	5.0
13	7.5	.5	10.5	6.0	13.5	9.5	21.5	10.0	14.5	10.5	10.0	5.0
14	6.0	2.5	10.0	6.5	13.5	7.5	23.0	10.5	18.0	7.5	11.5	7.5
15	7.5	3.5	11.0	6.0	12.5	6.5	23.5	12.0	13.0	10.0	13.0	5.5
16	4.5	1.0	8.0	5.0	14.0	6.0	16.0	12.5	14.5	9.5	12.5	4.5
17	7.5	.5	9.0	4.5	18.0	6.5	21.0	9.5	14.5	8.0	9.0	4.5
18	6.5	2.0	12.5	4.0	16.0	9.0	21.5	9.0	18.0	6.0	8.5	4.5
19	7.5	2.0	12.5	5.5	20.5	10.0	21.0	9.5	16.5	8.0	9.5	3.5
20	5.0	3.0	12.0	6.0	20.5	8.5	21.0	9.0	14.0	8.5	10.5	2.5
21	5.5	1.0	13.0	7.5	16.0	9.5	22.5	9.0	17.5	9.5	9.0	3.5
22	5.5	2.0	11.5	5.5	20.0	8.5	23.5	10.0	12.5	10.5	10.0	5.5
23	7.5	1.0	8.0	3.5	18.0	10.0	24.5	11.5	16.5	10.0	14.0	4.0
24	8.5	3.5	9.0	5.0	12.5	10.0	24.0	12.0	15.5	9.0	15.0	5.0
25	8.5	5.0	10.0	4.5	13.0	9.0	24.5	10.5	14.0	9.5	15.5	6.0
26	6.5	5.5	9.0	4.0	16.0	7.5	23.0	14.5	17.0	6.5	16.0	6.5
27	6.0	4.5	11.0	6.0	21.0	8.0	24.0	12.5	18.0	5.5	12.0	7.0
28	7.5	4.5	14.5	7.5	18.0	10.5	23.0	10.5	18.5	7.0	13.0	6.5
29	9.0	3.5	14.0	6.5	17.5	9.5	23.5	10.0	19.5	7.5	13.0	4.0
30	10.0	2.5	14.5	5.5	18.0	10.5	23.0	10.0	15.5	11.5	11.5	5.0
31	---	---	12.5	5.0	---	---	23.0	9.5	16.0	10.0	---	---
MONTH	10.0	.5	14.5	2.5	21.0	5.0	24.5	7.5	24.5	5.5	19.5	2.5

13318060 MEADOW CREEK ABOVE BEAR CREEK, NEAR STARKEY, OR

LOCATION.--Lat 45°16'04", long 118°31'25", in NE¼SW¼ sec.26, T.3 S., R.34 E., Union County, Hydrologic Unit 17060104, in Starkey Experimental Forest, on left bank 0.2 mi (0.3 km) upstream from bridge, 1.5 mi (2.4 km) upstream from Bear Creek, 4.5 mi (7.2 km) northwest of Starkey, and 21 mi (34 km) west of LaGrande.

DRAINAGE AREA.--48.2 mi^2 (124.8 km^2).

PERIOD OF RECORD.--July 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,710 ft (1,131 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, Aug. 8 to Sept. 11, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 339 ft^3/s (9.60 m^3/s) Dec. 13, 1977, gage height, 3.21 ft (0.978 m); minimum daily, 0.52 ft^3/s (0.015 m^3/s) Aug. 18, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 230 ft^3/s (6.51 m^3/s) and maximum discharge, 339 ft^3/s (9.60 m^3/s) Dec. 13, gage height, 3.21 ft (0.978 m); minimum daily, 0.86 ft^3/s (0.024 m^3/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	5.4	62	11	25	79	170	68	14	9.7	1.6	2.2
2	5.4	6.1	112	13	24	75	166	60	14	12	1.6	2.1
3	5.1	5.7	170	23	24	63	145	53	13	9.2	1.5	2.0
4	4.7	6.1	117	25	25	55	130	49	11	8.2	1.3	1.9
5	4.7	6.1	83	27	26	52	117	46	10	7.3	1.3	2.2
6	4.7	5.7	70	26	35	52	115	42	9.7	6.5	1.1	2.9
7	5.7	5.7	62	24	44	53	107	37	9.2	6.1	1.1	4.3
8	6.1	5.4	52	23	50	85	98	34	8.2	6.1	.94	4.0
9	5.1	5.4	47	24	52	180	87	34	8.2	5.4	.90	3.5
10	4.7	4.7	40	26	49	173	77	38	9.2	5.1	.86	4.0
11	4.7	4.7	40	25	47	142	70	34	10	4.7	.94	3.5
12	4.4	4.7	42	27	42	117	63	32	8.7	4.7	1.3	3.2
13	4.4	5.4	170	29	47	98	57	33	9.2	4.4	2.0	3.2
14	4.2	6.1	305	30	42	81	52	32	9.7	4.2	2.3	3.0
15	4.2	7.8	276	33	34	70	49	39	9.2	3.9	3.2	3.0
16	4.2	8.7	177	37	33	67	58	40	8.2	3.6	3.9	2.8
17	3.9	8.7	130	40	35	81	57	38	7.8	3.9	3.1	2.8
18	3.9	7.3	98	42	35	125	67	37	6.9	3.6	2.7	3.6
19	3.9	7.8	66	42	31	166	74	34	6.5	3.2	2.2	3.2
20	3.6	6.6	48	40	35	187	75	32	6.1	3.2	2.3	3.0
21	3.6	7.0	54	40	44	187	74	31	5.7	3.0	2.4	3.0
22	3.6	8.2	50	39	60	194	72	29	6.1	2.8	2.7	3.0
23	3.6	10	47	39	68	201	70	26	5.7	2.8	3.1	2.8
24	3.6	15	50	30	75	177	68	25	6.1	2.6	2.7	2.6
25	5.1	25	46	34	105	170	65	24	6.9	2.4	2.5	2.6
26	6.1	112	43	36	115	173	68	23	6.5	2.4	2.4	2.4
27	5.1	81	42	25	105	173	77	21	5.7	2.3	2.2	2.4
28	4.7	70	40	30	91	157	89	21	5.7	2.1	2.0	2.4
29	4.7	74	38	30	---	139	85	18	7.8	1.9	1.9	2.3
30	5.1	75	35	27	---	125	77	17	6.9	1.9	2.2	2.3
31	5.1	---	30	26	---	110	---	16	---	1.8	2.4	---
TOTAL	143.6	601.3	2642	923	1398	3807	2579	1063	251.9	141.0	62.64	86.2
MEAN	4.63	20.0	85.2	29.8	49.9	123	86.0	34.3	8.40	4.55	2.02	2.87
MAX	6.1	112	305	42	115	201	170	68	14	12	3.9	4.3
MIN	3.6	4.7	30	11	24	52	49	16	5.7	1.8	.86	1.9
CFSM	.10	.42	1.77	.62	1.04	2.55	1.78	.71	.17	.09	.04	.06
IN.	.11	.46	2.04	.71	1.08	2.94	1.99	.82	.19	.11	.05	.07
AC-FT	285	1190	5240	1830	2770	7550	5120	2110	500	280	124	171

WTR YR 1978 TOTAL 13698.64 MEAN 37.5 MAX 305 MIN .86 CFSM .78 IN 10.57 AC-FT 27170

13318060 MEADOW CREEK ABOVE BEAR CREEK, NEAR STARKEY, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1977 to current year.

REMARKS.--No record Jan. 1-23.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 26.5°C July 15, 1978; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 26.5°C July 15; minimum, 0.0°C on many days during winter periods.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1									---	---	16.0	7.0
2									---	---	16.5	9.0
3									---	---	19.0	12.0
4									---	---	20.0	13.0
5									---	---	20.0	15.0
6									---	---	19.0	12.0
7									---	---	18.0	11.0
8									---	---	16.0	9.5
9									---	---	15.5	7.5
10									---	---	15.5	8.0
11									---	---	15.5	8.0
12									---	---	15.0	8.0
13									---	---	15.0	7.5
14									---	---	15.5	9.0
15									---	---	14.5	9.0
16									---	---	12.0	9.5
17									---	---	12.5	6.5
18									---	---	13.5	9.5
19									---	---	13.5	10.0
20									---	---	12.5	10.0
21									---	---	10.0	7.0
22									---	---	10.0	6.0
23									---	---	8.0	5.0
24									---	---	10.5	7.0
25									---	---	11.5	7.0
26									15.0	---	11.0	6.0
27									16.0	11.0	11.0	6.5
28									16.0	11.0	10.5	8.5
29									15.5	12.5	9.5	8.0
30									13.0	10.0	9.5	6.5
31									13.0	8.0	---	---
MONTH									16.0	8.0	20.0	5.0

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.0	4.5	5.5	3.5	3.5	.5	---	---	1.5	.5	1.0	.0
2	9.0	4.0	4.5	1.0	3.5	2.5	---	---	1.5	.5	1.0	.0
3	8.0	3.5	3.0	.0	4.0	2.5	---	---	3.0	1.0	1.0	.0
4	8.0	3.0	2.5	.0	3.0	2.0	---	---	2.0	.5	2.5	1.0
5	9.0	3.5	4.0	1.5	2.5	1.5	---	---	3.0	1.0	4.0	1.5
6	9.0	4.5	4.0	2.5	3.5	2.0	---	---	2.5	1.0	5.0	1.5
7	8.5	5.5	3.5	.5	3.0	.5	---	---	2.0	1.0	4.5	2.0
8	9.0	3.5	1.0	.0	1.0	.0	---	---	2.0	.5	4.0	2.0
9	8.0	5.5	3.5	.5	1.0	.0	---	---	2.5	.5	3.5	1.0
10	7.5	4.0	3.0	.5	2.5	1.0	---	---	.5	.0	4.0	.5
11	7.5	3.0	3.5	.5	3.5	2.0	---	---	1.0	.0	3.0	1.0
12	8.0	3.0	3.5	1.0	2.5	1.0	---	---	.0	.0	3.0	1.0
13	10.0	4.5	4.0	1.0	3.0	1.0	---	---	.5	.0	3.5	.0
14	8.5	4.5	3.0	1.0	4.0	3.0	---	---	.5	.0	4.0	.0
15	9.0	3.5	4.0	2.0	3.5	1.5	---	---	1.0	.0	4.0	.0
16	9.0	4.5	2.5	.0	2.5	1.0	---	---	1.0	.0	5.5	.0
17	8.0	3.5	.5	.0	2.0	1.5	---	---	.5	.0	6.5	1.0
18	8.0	3.5	.5	.0	2.0	.5	---	---	1.0	.0	6.0	1.0
19	9.0	4.5	.0	.0	.5	.0	---	---	4.0	1.0	6.0	1.5
20	7.0	3.0	.0	.0	.0	.0	---	---	3.5	1.0	6.5	1.0
21	6.5	3.0	.0	.0	.0	.0	---	---	3.0	.5	6.5	1.5
22	6.0	2.0	.0	.0	.0	.0	---	---	3.0	.5	7.5	2.0
23	7.5	4.0	.0	.0	.0	.0	---	---	2.5	.0	4.5	2.0
24	8.0	3.5	.0	.0	.5	.0	.0	.0	2.5	1.5	6.0	1.5
25	7.5	6.0	.0	.0	1.5	.0	.5	.0	3.0	1.0	7.5	3.0
26	7.5	4.0	.0	.0	2.0	1.5	.5	.0	2.5	1.5	8.5	3.0
27	5.0	3.5	1.0	.0	1.5	1.0	.0	.0	3.0	1.0	9.0	3.5
28	7.0	4.0	2.5	1.0	.5	.0	.5	.0	2.5	.0	8.5	3.0
29	7.0	5.0	3.5	1.5	1.5	.5	1.0	.0	---	---	8.0	3.5
30	6.5	4.0	1.5	.0	1.5	.0	1.0	.0	---	---	7.0	4.5
31	5.5	3.0	---	---	.0	.0	2.0	.0	---	---	9.0	5.0
MONTH	10.0	2.0	5.5	.0	4.0	.0	2.0	.0	4.0	.0	9.0	.0

13318060 MEADOW CREEK ABOVE BEAR CREEK, NEAR STARKEY, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	3.5	11.5	4.5	18.5	7.0	20.0	13.0	24.0	12.5	19.0	11.5
2	5.5	2.5	10.5	4.0	20.0	8.5	15.5	11.5	24.5	12.5	19.5	11.5
3	7.0	2.5	10.0	4.0	21.0	9.5	13.5	12.0	25.0	13.5	19.0	11.5
4	4.0	2.5	6.5	2.5	21.0	11.0	15.0	11.5	25.0	15.0	17.5	10.5
5	6.0	2.0	8.0	2.5	21.5	11.5	19.0	12.0	25.0	16.0	15.0	11.5
6	4.5	2.5	12.0	4.0	21.5	12.0	22.5	12.0	24.0	13.0	15.5	12.5
7	4.0	2.5	13.0	4.0	21.0	11.5	19.5	13.5	24.5	13.5	13.0	10.0
8	7.0	2.0	15.0	5.0	22.0	10.5	23.0	14.0	24.5	13.5	14.5	8.0
9	9.0	1.5	12.5	7.0	18.5	12.5	24.0	12.5	25.0	15.0	15.0	9.0
10	10.5	3.0	12.5	7.0	14.5	10.5	21.0	13.5	23.0	13.5	14.0	9.0
11	8.5	3.5	10.0	6.0	17.5	9.5	20.5	11.0	22.0	13.0	12.5	8.5
12	8.5	1.5	10.5	5.0	15.0	11.0	23.0	10.5	17.0	14.0	13.5	7.0
13	7.5	1.0	12.0	7.0	15.5	11.0	24.5	12.5	17.0	13.0	12.5	7.0
14	7.0	3.0	11.5	7.5	16.0	9.5	25.5	13.5	19.0	10.5	13.5	9.5
15	8.5	4.0	12.0	7.0	15.5	8.5	26.5	15.0	15.5	12.5	13.0	7.5
16	5.5	1.5	9.5	6.0	16.5	7.0	19.0	15.0	15.5	12.0	12.0	6.0
17	8.0	1.0	11.0	5.0	21.5	8.5	23.5	12.5	15.0	10.0	10.0	6.0
18	7.0	2.5	13.5	5.0	18.5	11.0	23.0	12.0	19.0	8.5	9.5	6.0
19	7.5	2.5	15.0	6.5	22.5	11.5	23.0	12.5	18.0	11.0	10.5	5.0
20	5.5	3.5	14.0	7.5	22.5	10.5	23.0	12.0	16.5	11.0	11.5	4.0
21	6.0	1.5	14.5	9.5	18.0	11.5	24.0	12.0	18.0	11.0	11.0	5.5
22	6.0	2.0	12.0	7.0	22.5	11.0	25.0	13.0	15.0	12.5	12.0	7.5
23	8.0	1.5	8.5	4.5	20.0	12.0	25.5	14.5	18.0	11.5	13.5	6.0
24	9.5	4.5	11.0	5.5	14.5	11.0	25.5	15.0	17.0	11.5	15.0	7.0
25	9.5	6.0	11.5	5.5	15.0	10.5	26.0	13.5	15.5	11.5	15.5	8.5
26	7.5	6.5	10.5	5.0	20.0	9.0	24.5	17.5	17.0	8.5	15.5	9.0
27	6.5	5.5	13.5	7.0	23.0	10.0	25.5	16.0	17.0	8.0	13.5	9.5
28	8.5	5.0	17.0	9.0	21.5	12.5	24.0	13.5	18.5	9.5	13.0	8.5
29	10.0	4.0	16.0	7.5	21.0	12.0	25.0	13.5	19.5	10.5	12.5	6.0
30	10.5	3.5	16.5	6.5	21.0	13.5	24.5	13.0	17.0	13.5	13.0	7.0
31	---	---	16.5	6.5	---	---	24.0	13.0	18.0	11.5	---	---
MONTH	10.5	1.0	17.0	2.5	23.0	7.0	26.5	10.5	25.0	8.0	19.5	4.0

13318800 GRANDE RONDE RIVER AT HILGARD, OR

LOCATION.--Lat 45°20'21", long 118°14'35", in NE¼NE¼ sec.1, T.3 S., R.36 E., Union County, Hydrologic Unit 17060104, on left bank 8.8 mi (14.2 km) northwest of La Grande, 1.6 mi (2.6 km) upstream from Fivepoint Creek, and at mile 171.3 (275.6 km).

DRAINAGE AREA.--555 mi² (1,437 km²).

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,993.62 ft (912.455 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Slight regulation by city of La Grande reservoir on Beaver Creek, capacity, about 900 acre-ft (1.11 hm³). Diversions for irrigation above station. Since 1909, city of La Grande has diverted about 3 ft³/s (0.08 m³/s) from Beaver Creek above station for domestic water supply.

AVERAGE DISCHARGE.--12 years, 295 ft³/s (8.354 m³/s), 213,700 acre-ft/yr (263 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,740 ft³/s (134 m³/s) Mar. 13, 1972, gage height, 7.18 ft (2.188 m); maximum gage height, 12.25 ft (3.734 m) Jan. 15, 1974 (ice jam); minimum discharge, 9.6 ft³/s (0.27 m³/s) Aug. 17, 18, 23, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 30, 1965, reached a stage of about 9 ft (2.74 m), from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s (48.1 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 15	0930	1,710	48.4	4.99	1.521	Apr. 27	1500	*2,220	62.9	*5.38	1.640

Minimum, 19 ft³/s (0.54 m³/s) Oct. 19-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	47	296	78	192	496	1420	1260	351	212	44	41
2	44	48	628	85	182	421	1420	1120	345	265	43	39
3	40	51	612	150	195	394	1220	1010	345	209	41	36
4	38	47	573	170	212	372	1060	907	345	202	40	34
5	36	45	427	185	226	421	952	829	351	185	40	34
6	35	44	361	176	383	449	898	732	345	176	39	40
7	38	43	325	158	410	427	872	642	330	167	36	63
8	43	39	256	158	415	534	812	593	320	179	34	103
9	41	38	223	164	394	1080	748	593	306	155	33	72
10	38	39	233	195	330	1030	701	764	306	143	32	62
11	35	38	219	185	320	872	686	756	330	132	31	65
12	34	38	226	195	233	756	635	701	278	125	32	63
13	33	39	772	223	282	642	600	694	256	117	41	59
14	32	43	1340	256	237	560	573	740	252	107	60	55
15	32	50	1420	335	233	472	547	829	237	101	52	52
16	31	54	999	377	198	449	672	796	215	96	74	48
17	29	40	756	432	179	443	657	717	198	94	74	47
18	29	35	600	449	179	540	664	672	189	88	60	54
19	29	30	461	383	215	650	650	635	189	84	52	55
20	28	27	278	383	256	764	657	614	173	78	48	54
21	28	52	361	399	287	804	657	621	173	74	48	52
22	28	72	335	372	340	846	642	657	198	70	54	52
23	28	119	287	306	377	916	642	587	182	67	86	50
24	28	155	325	219	427	898	600	540	167	63	63	47
25	34	170	310	269	607	821	593	509	167	59	54	44
26	55	351	306	269	686	829	701	455	158	55	51	43
27	48	320	269	182	672	916	1680	421	140	55	47	40
28	50	340	233	237	567	934	2080	427	132	52	44	40
29	48	356	256	230	---	961	1780	421	161	50	41	39
30	44	340	237	195	---	1020	1500	388	176	47	40	39
31	47	---	185	202	---	1020	---	366	---	45	43	---
TOTAL	1153	3110	14309	7617	9234	21737	27319	20996	7315	3552	1477	1522
MEAN	37.2	104	462	246	330	701	911	677	244	115	47.6	50.7
MAX	55	356	1420	449	686	1080	2080	1260	351	265	86	103
MIN	28	27	185	78	179	372	547	366	132	45	31	34
AC-FT	2290	6170	28380	15110	18320	43120	54190	41650	14510	7050	2930	3020

CAL YR 1977 TOTAL 59690 MEAN 164 MAX 1420 MIN 15 AC-FT 118400
WTR YR 1978 TOTAL 119341 MEAN 327 MAX 2080 MIN 27 AC-FT 236700

13319000 GRANDE RONDE RIVER AT LA GRANDE, OR

LOCATION.--Lat 45°20'47", long 118°07'26", in NW¼SE¼ sec.36, T.2 S., R.37 E., Union County, Hydrologic Unit 17060104, on right bank 1.8 mi (2.9 km) northwest of La Grande, 5.7 mi (9.2 km) downstream from Fivepoint Creek, and at mile 164.0 (263.9 km).

DRAINAGE AREA.--678 mi² (1,756 km²).

PERIOD OF RECORD.--October 1903 to September 1915, February 1918 to September 1923, October 1925 to current year. Monthly discharge only for some periods, published in WSP 1317. Published as "at Hilgard" 1903-15.

REVISED RECORDS.--WSP 768: 1933. WSP 1397: 1904-11, 1913, 1915, 1919-20, 1922-23, 1926, 1929-31, 1936-37, 1939, 1942. WSP 1737: Drainage area. WRD Oreg. 1974: 1973(M).

GAGE.--Water-stage recorder. Datum of gage is 2,826.25 ft (861.441 m) National Geodetic Vertical Datum of 1929. Nov. 6, 1903, to Sept. 30, 1915, nonrecording gage at site 5.5 mi (8.8 km) upstream at various datums. Feb. 16, 1918, to June 28, 1923, and Oct. 1, 1925, to Nov. 23, 1931, nonrecording gage at site 0.7 mi (1.1 km) downstream at various datums. Nov. 24, 1931, to Oct. 8, 1965, water-stage recorder at site 0.3 mi (0.5 km) upstream at datum 4.61 ft (1.405 m) higher.

REMARKS.--Records excellent. Since 1915, slight regulation by city of La Grande reservoir on Beaver Creek, capacity, about 900 acre-ft (1.11 hm³). Diversions for irrigation above station. Since 1909, city of La Grande has diverted about 3 ft³/s (0.08 m³/s) from Beaver Creek above station for domestic water supply.

AVERAGE DISCHARGE.--70 years, 380 ft³/s (10.76 m³/s), 275,300 acre-ft/yr (339 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft³/s (399 m³/s) Jan. 30, 1965, gage height, 11.44 ft (3.487 m), site and datum then in use, from rating curve extended above 7,200 ft³/s (204 m³/s); minimum, 3.9 ft³/s (0.11 m³/s) Aug. 26, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,100 ft³/s (59.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 2	1930	2,270	64.3	6.08	1.853	Apr. 1	1530	2,120	60.0	5.90	1.798
Dec. 15	1030	2,370	67.1	6.21	1.893	Apr. 27	1700	*3,340	94.6	*7.24	2.207

Minimum, 28 ft³/s (0.79 m³/s) Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	63	398	100	270	675	1830	1550	411	220	44	46
2	55	66	1170	110	255	569	1820	1370	401	308	42	41
3	50	69	1360	200	267	531	1530	1220	401	239	41	38
4	46	62	841	291	305	508	1330	1100	398	228	38	34
5	43	60	617	258	350	561	1190	993	401	215	37	34
6	42	58	512	239	554	601	1120	875	398	200	37	40
7	44	58	462	217	613	573	1090	771	385	190	34	71
8	50	56	379	223	605	718	1010	713	366	217	32	117
9	50	51	320	231	565	1420	930	705	347	187	31	91
10	44	54	335	288	483	1350	870	905	350	163	29	74
11	42	51	317	285	458	1130	846	885	372	150	28	76
12	40	51	329	288	354	987	790	822	326	141	29	74
13	40	52	1360	326	398	841	749	818	296	133	36	68
14	38	58	2010	369	350	735	709	870	293	123	62	62
15	37	72	2000	483	341	633	679	951	279	115	58	59
1[illegible]	37	84	1360	550	296	597	818	920	253	109	74	52
1[illegible]	37	69	1010	609	267	593	818	822	236	107	84	50
18	36	52	794	645	258	705	813	762	223	100	69	56
19	36	45	621	550	320	832	785	722	223	94	58	60
20	36	37	424	523	369	977	794	696	205	89	51	58
21	36	45	458	538	398	1020	790	705	200	84	51	58
22	36	80	434	516	458	1070	771	749	225	79	60	56
23	37	120	394	437	505	1160	776	666	212	76	94	52
24	37	160	417	332	573	1140	731	613	192	71	74	48
25	42	200	404	366	813	1050	713	581	192	65	62	46
26	63	380	398	372	930	1060	813	527	180	60	56	42
27	63	407	369	279	915	1190	2250	487	156	59	52	40
28	60	434	314	323	771	1220	2770	490	148	56	47	38
29	63	462	344	323	---	1250	2230	476	178	52	43	37
30	56	462	326	285	---	1330	1650	444	197	48	42	37
31	60	---	261	282	---	1310	---	424	---	46	44	---
TOTAL	1418	3918	20738	10838	13041	28336	34215	24632	8444	4024	1539	1655
MEAN	45.7	131	669	350	466	914	1141	795	281	130	49.6	55.2
MAX	63	462	2010	645	930	1420	2770	1550	411	308	94	117
MIN	36	37	261	100	255	508	679	424	148	46	28	34
AC-FT	2810	7770	41130	21500	25870	56200	67870	48860	16750	7980	3050	3280

CAL YR 1977 TOTAL 74846 MEAN 205 MAX 2010 MIN 18 AC-FT 148500
WTR YR 1978 TOTAL 152798 MEAN 419 MAX 2770 MIN 28 AC-FT 303100

13320000 CATHERINE CREEK NEAR UNION, OR

LOCATION.--Lat 45°09'20", long 117°46'26", in NW¼SE¼ sec.2, T.5 S., R.40 E., Union County, Hydrologic Unit 17060104, on right bank 3.0 mi (4.8 km) downstream from Little Catherine Creek, 5.5 mi (8.8 km) southeast of Union, and at mile 25.4 (40.9 km).

DRAINAGE AREA.--105 mi^2 (272 km^2).

PERIOD OF RECORD.--May 1906 to May 1907 (gage heights only), August 1911 to December 1912, March to September 1915, February 1918 to September 1919, October 1925 to current year. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.--WSP 1397: 1912-13, 1919, 1926, 1928-33, 1937, 1939, 1940(M), 1941-43, 1950.

GAGE.--Water-stage recorder. Datum of gage is 3,081.76 ft (939.320 m) National Geodetic Vertical Datum of 1929 (Oregon State Highway Department bench mark). Prior to Nov. 28, 1938, nonrecording gage at several sites within 1.8 mi (2.9 km) of present site at various datums. Nov. 28, 1938, to May 16, 1939, water-stage recorder at site 400 ft (122 m) downstream at datum 4.29 ft (1.308 m) lower.

REMARKS.--Records excellent. No regulation. Several small diversions for irrigation above station. Since 1937, diversion to Big Creek in Powder River basin provides a small part of the water used for irrigation in that basin.

AVERAGE DISCHARGE.--55 years (water years 1912, 1919, 1926-78), 119 ft^3/s (3.370 m^3/s), 86,220 acre-ft/yr (106 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,740 ft^3/s (49.3 m^3/s) May 27, 1948, gage height, 4.57 ft (1.393 m); minimum, 6.5 ft^3/s (0.18 m^3/s) Feb. 4, 1955, result of freezeup; minimum daily, 8 ft^3/s (0.23 m^3/s) Nov. 7, 1925.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s (14.2 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 1	1000	*634	18.0	*2.96	0.902	June 6	2100	556	15.7	2.79	0.850
Apr. 28	0400	629	17.8	2.95	0.899						

Minimum discharge, 23 ft^3/s (0.65 m^3/s) Oct. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	32	76	40	47	75	578	454	285	234	56	37
2	32	34	197	42	47	73	504	439	309	223	54	35
3	30	30	231	52	47	72	412	419	351	207	53	34
4	29	31	168	56	47	72	358	382	404	202	52	34
5	28	35	134	54	54	81	322	335	471	192	52	41
6	27	34	116	53	89	87	303	306	512	187	48	52
7	31	34	101	49	116	94	282	291	512	185	47	58
8	32	30	89	49	124	110	264	294	495	180	46	61
9	30	32	80	49	118	140	253	325	487	180	45	47
10	28	30	73	52	103	150	256	390	439	195	44	60
11	28	30	72	52	92	148	279	379	375	168	43	52
12	27	30	67	51	83	138	267	341	335	150	44	47
13	26	32	85	49	75	124	259	344	322	142	54	45
14	25	33	112	52	68	110	248	397	309	136	49	44
15	24	42	164	60	68	101	239	412	285	132	57	42
16	24	42	153	70	62	94	262	382	262	128	64	41
17	24	35	134	89	60	96	239	344	248	118	52	41
18	24	28	116	89	57	110	229	331	256	108	47	42
19	24	25	97	83	58	132	226	325	259	103	45	41
20	24	27	73	76	60	161	237	341	270	96	44	39
21	24	30	89	70	60	182	226	379	279	90	43	37
22	24	37	92	67	62	207	215	419	285	87	48	36
23	24	43	87	58	68	242	205	393	291	81	48	36
24	24	54	72	54	73	239	202	348	279	78	43	35
25	35	99	65	58	75	226	223	306	264	73	41	34
26	36	105	62	56	78	239	267	276	231	70	39	34
27	29	78	58	53	78	291	525	264	220	68	38	34
28	28	68	57	52	76	331	615	282	231	67	37	34
29	32	83	57	51	---	382	560	294	242	62	36	33
30	34	80	56	49	---	427	495	288	245	60	36	33
31	31	---	48	48	---	419	---	279	---	57	41	---
TOTAL	872	1323	3081	1783	2045	5353	9550	10759	9753	4059	1446	1239
MEAN	28.1	44.1	99.4	57.5	73.0	173	318	347	325	131	46.6	41.3
MAX	36	105	231	89	124	427	615	454	512	234	64	61
MIN	24	25	48	40	47	72	202	264	220	57	36	33
AC-FT	1730	2620	6110	3540	4060	10620	18940	21340	19350	8050	2870	2460

CAL YR 1977 TOTAL 20626 MEAN 56.5 MAX 263 MIN 14 AC-FT 40910
WTR YR 1978 TOTAL 51263 MEAN 140 MAX 615 MIN 24 AC-FT 101700

13323500 GRANDE RONDE RIVER NEAR ELGIN, OR

LOCATION.--Lat 45°30'45", long 117°55'35", in NW¼NW¼ sec.3, T.1 S., R.39 E., Union County, Hydrologic Unit 17060104, on right bank 700 ft (213 m) upstream from abandoned highway bridge, 1.5 mi (2.4 km) downstream from Willow Creek, 3.6 mi (5.8 km) south of Elgin, and at mile 104.2 (167.7 km).

DRAINAGE AREA.--1,250 mi^2 (3,240 km^2), approximately.

PERIOD OF RECORD.--August 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,660.31 ft (810.862 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period January to July, which are fair. No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--23 years, 666 ft^3/s (18.86 m^3/s), 482,500 acre-ft/yr (595 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,480 ft^3/s (184 m^3/s) Feb. 2, 1965, gage height, 13.79 ft (4.203 m); no flow Aug. 20-24, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Outstanding floods occurred in 1894 and 1917, based on Corps of Engineers flood profiles. Flood in May 1948 reached an elevation of 2,672.9 ft (814.70 m) on Corps of Engineers gage at bridge 700 ft (213 m) downstream, discharge, 5,690 ft^3/s (161 m^3/s), result of discharge measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,270 ft^3/s (92.6 m^3/s) Apr. 30, gage height, 9.46 ft (2.883 m); minimum, 17 ft^3/s (0.48 m^3/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	117	686	600	608	1250	2230	3240	1030	431	31	72
2	101	117	850	500	608	1120	2540	3100	998	460	28	64
3	96	120	1890	547	648	1000	2690	2920	958	516	23	60
4	87	122	1870	710	710	946	2660	2750	934	474	22	59
5	82	120	1450	748	672	982	2570	2580	918	460	22	57
6	85	117	1140	717	755	1060	2450	2410	918	440	21	61
7	101	110	970	669	998	1060	2360	2220	942	420	22	76
8	117	110	828	621	1120	1060	2250	2010	970	420	22	118
9	120	107	693	608	1170	1320	2120	1830	974	428	22	170
10	113	101	615	641	1150	1820	1970	1730	974	414	19	176
11	100	101	595	727	1060	1940	1850	1750	986	395	18	168
12	91	100	589	686	982	1850	1770	1700	998	372	18	158
13	85	100	974	707	835	1690	1680	1720	946	352	24	154
14	83	104	2270	717	828	1530	1610	1750	888	327	29	148
15	82	122	2650	780	763	1370	1540	1780	842	292	25	135
16	79	137	2740	926	738	1220	1490	1860	798	262	36	134
17	80	146	2350	1020	686	1130	1530	1850	741	234	45	134
18	79	141	1910	1170	631	1080	1540	1780	693	221	75	132
19	78	130	1510	1140	618	1130	1530	1720	648	198	75	135
20	79	100	1160	1050	665	1250	1510	1640	611	183	75	141
21	76	90	861	1020	700	1400	1500	1580	579	168	79	134
22	75	112	766	1020	731	1510	1490	1550	560	158	83	130
23	72	227	727	954	773	1600	1470	1530	550	146	100	127
24	71	198	795	842	820	1730	1450	1500	544	134	112	122
25	72	267	876	731	950	1780	1410	1470	535	122	106	117
26	80	440	911	738	1180	1760	1380	1410	532	75	104	112
27	98	652	876	741	1340	1760	1520	1330	523	48	100	106
28	112	693	777	648	1380	1830	2260	1240	495	39	100	103
29	115	689	721	676	---	1920	2930	1180	465	34	94	98
30	113	741	731	665	---	2000	3240	1130	442	35	86	97
31	110	---	679	615	---	2080	---	1080	---	33	80	---
TOTAL	2842	6431	36460	23934	24119	45178	58540	57340	22992	8291	1696	3498
MEAN	91.7	214	1176	772	861	1457	1951	1850	766	267	54.7	117
MAX	120	741	2740	1170	1380	2080	3240	3240	1030	516	112	176
MIN	71	90	589	500	608	946	1380	1080	442	33	18	57
AC-FT	5640	12760	72320	47470	47840	89610	116100	113700	45600	16450	3360	6940

CAL YR 1977 TOTAL 113905.9 MEAN 312 MAX 2740 MIN 2.6 AC-FT 225900
WTR YR 1978 TOTAL 291321.0 MEAN 798 MAX 3240 MIN 18 AC-FT 577800

13325001 EAST FORK WALLOWA RIVER NEAR JOSEPH, OR

LOCATION.--Lat 45°16'20", long 117°12'35", in NE¼ sec.29, T.3 S., R.45 E., Wallowa County, Hydrologic Unit 17060105, on left bank 0.2 mi (0.3 km) upstream from confluence with West Fork, 1.0 mi (1.6 km) upstream from Wallowa Lake, 5.5 mi (8.8 km) south of Joseph, and at mile 55.0 (88.5 km).

DRAINAGE AREA.--10.3 mi^2 (26.7 km^2).

PERIOD OF RECORD.--July 1924 to current year. Prior to October 1952, records published separately as East Fork Wallowa River near Joseph and Wallowa Falls powerplant tailrace near Joseph.

REVISED RECORDS.--WSP 1247: 1931, 1937(M), 1948-49, records for river station; 1948, records for tailrace station. WSP 1737: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,517.69 ft (1,376.992 m) National Geodetic Vertical Datum of 1929 (Pacific Power & Light Co. bench mark). Prior to Apr. 8, 1950, nonrecording gage at same site and datum.

REMARKS.--Records good. All records presented herein include flow in Wallowa Falls powerplant tailrace of Pacific Power & Light Co. Most of low flow is diverted at dam 1.5 mi (2.4 km) upstream into a conduit 1.0 mi (1.6 km) above Wallowa Falls powerhouse and discharged into West Fork 0.4 mi (0.6 km) below powerhouse.

AVERAGE DISCHARGE.--54 years, 21.6 ft^3/s (0.612 m^3/s), 28.48 in/yr (723 mm/yr), 15,650 acre-ft/yr (19.3 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 450 ft^3/s (12.7 m^3/s) July 25, 1937 (no flow in powerplant tailrace), from rating curve extended above 80 ft^3/s (2.27 m^3/s); minimum daily, 4.6 ft^3/s (0.13 m^3/s) Feb. 17, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 87 ft^3/s (2.46 m^3/s) July 7; minimum daily, 4.6 ft^3/s (0.13 m^3/s) Feb. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	7.2	7.4	8.9	8.9	7.9	19	19	24	68	32	18
2	11	12	15	8.9	8.9	7.8	17	20	28	69	32	18
3	11	9.0	12	9.1	9.1	8.8	13	19	32	60	31	17
4	11	9.6	11	9.6	9.0	8.9	13	18	38	59	32	17
5	10	11	10	9.8	9.0	7.9	8.9	17	43	54	28	22
6	11	9.9	10	10	9.1	7.9	11	16	50	57	28	22
7	11	9.6	9.7	9.8	8.8	7.9	15	16	56	70	27	26
8	11	9.1	9.7	9.8	9.1	8.5	13	16	60	66	26	22
9	11	9.5	10	9.6	9.1	8.0	8.4	18	66	59	25	21
10	9.7	9.3	9.7	9.6	9.3	8.1	12	19	64	66	24	25
11	9.6	9.5	9.9	9.5	8.9	8.2	12	19	57	60	24	22
12	9.6	9.3	10	9.9	8.4	8.2	12	18	58	58	25	20
13	9.6	9.4	13	10	9.3	8.0	11	21	59	66	29	20
14	10	9.3	14	9.8	8.5	7.9	12	28	59	63	26	20
15	9.9	9.7	13	9.7	8.2	8.1	11	29	54	62	28	19
16	10	9.0	12	9.8	5.8	8.5	12	24	49	63	29	19
17	8.6	8.7	12	9.5	4.6	8.4	11	22	49	59	25	19
18	9.6	7.4	11	9.6	7.3	8.4	11	21	50	53	23	18
19	9.5	7.4	9.5	9.5	9.8	8.5	11	20	53	50	22	19
20	9.5	7.3	9.2	9.0	9.3	8.5	11	21	53	47	21	20
21	9.1	7.3	9.5	9.5	8.2	8.6	11	24	55	45	20	19
22	9.0	7.8	9.8	9.0	6.0	9.1	11	27	59	44	20	19
23	8.8	8.8	10	8.9	8.3	9.6	11	23	63	44	20	19
24	9.0	9.9	10	9.4	8.0	8.8	11	23	67	43	20	19
25	12	13	10	9.4	8.0	8.7	12	22	66	43	20	18
26	13	15	9.5	9.2	8.0	9.1	18	21	61	42	19	18
27	11	11	9.5	9.4	7.9	9.7	28	21	61	43	19	18
28	10	11	9.4	8.9	7.8	10	23	24	68	43	18	18
29	10	10	9.4	8.8	---	11	21	24	74	39	19	18
30	11	9.7	9.4	8.8	---	13	20	20	67	37	19	18
31	9.9	---	9.3	9.3	---	13	---	22	---	35	19	---
TOTAL	317.4	286.7	323.9	292.0	234.6	275.0	410.3	652	1643	1667	750	588
MEAN	10.2	9.56	10.4	9.42	8.38	8.87	13.7	21.0	54.8	53.8	24.2	19.6
MAX	13	15	15	10	9.8	13	28	29	74	70	32	26
MIN	8.6	7.2	7.4	8.8	4.6	7.8	8.4	16	24	35	18	17
CFSM	.99	.93	1.01	.92	.81	.86	1.33	2.04	5.32	5.22	2.35	1.90
IN.	1.15	1.04	1.17	1.05	.85	.94	1.48	2.35	5.93	6.02	2.71	2.12
AC-FT	630	569	642	579	465	545	814	1290	3260	3310	1490	1170

CAL YR 1977 TOTAL 4779.0 MEAN 13.1 MAX 89 MIN 6.2 CFSM 1.27 IN 17.26 AC-FT 9480
WTR YR 1978 TOTAL 7439.9 MEAN 20.4 MAX 74 MIN 4.6 CFSM 1.98 IN 26.87 AC-FT 14760

13326000 WALLOWA LAKE NEAR JOSEPH, OR

LOCATION.--Lat 45°20'10", long 117°13'15", in NW¼ sec.5, T.3 S., R.45 E., Wallowa County, Hydrologic Unit 17060105, at spillway near right end of Wallowa Lake dam on Wallowa River, 1.3 mi (2.1 km) southeast of Joseph, and at mile 50.2 (80.8 km).

DRAINAGE AREA.--50.8 mi^2 (131.6 km^2).

PERIOD OF RECORD.--November 1903 to July 1906 (gage height only), January 1912 to March 1914, May to September 1915 (gage heights and change in contents only), October 1925 to June 1926, December 1926 to current year. Monthend contents only for some periods, published in WSP 1317. November 1903 to March 1905 published as Wallowa River at Joseph. Change in contents for January 1912 to March 1914 and May to September 1915 published with records for Wallowa River at Joseph.

REVISED RECORDS.--WSP 1737: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,355.66 ft (1,327.605 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1925, nonrecording gage at several sites within 0.5 mi (0.8 km) of present site at different datums. Oct. 1, 1925, to June 30, 1926, Dec. 1, 1926, to May 18, 1961, nonrecording gage near left end of dam at same datum.

REMARKS.--Reservoir is formed by concrete dam. Capacity, 42,750 acre-ft (52.7 hm^3) between gage heights 0.0 (sill of outlet gates) and 26.8 ft (8.169 m), spillway crest. About 5,300 acre-ft (6.53 hm^3) dead storage above outlet gates, because channel is about 3.4 ft (1.036 m) above outlet gates. Dead storage below outlet gates not known. Records are based on capacities above outlet gates.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 47,830 acre-ft (59.0 hm^3) June 5-7, 1957, gage height, 29.85 ft (9.098 m); minimum observed, 4,790 acre-ft (5.91 hm^3) Oct. 10, 1929, gage height, 3.10 ft (0.945 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 44,720 acre-ft (55.1 hm^3) July 11, gage height, 27.99 ft (8.531 m); minimum, 11,820 acre-ft (14.6 hm^3) Oct. 1, gage height, 7.62 ft (2.323 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30	7.63	11,840	-
Oct. 31	9.20	14,290	+2,450
Nov. 30	11.11	17,300	+3,010
Dec. 31	13.77	21,510	+4,210
CAL YR 1977	-	-	-7,970
Jan. 31	14.99	23,460	+1,954
Feb. 28	15.78	24,730	+1,270
Mar. 31	17.18	26,980	+2,250
Apr. 30	21.15	33,420	+6,440
May 31	26.28	41,890	+8,470
June 30	27.73	44,290	+2,400
July 31	26.97	43,030	-1,260
Aug. 31	22.34	35,380	-7,650
Sept.30	22.56	35,700	+320
WTR YR 1978	-	-	+23,860

13327500 WALLOWA RIVER AT JOSEPH, OR

LOCATION.--Lat 45°20'15", long 117°13'35", in NW¼ sec.5, T.3 S., R.45 E., Wallowa County, Hydrologic Unit 17060105, on left bank 0.2 mi (0.3 km) downstream from Wallowa Lake dam, 1.1 mi (1.8 km) south of Joseph, and at mile 50.0 (80.4 km).

DRAINAGE AREA.--50.9 mi^2 (131.8 km^2).

PERIOD OF RECORD.--November 1903 to August 1907, June 1908 to March 1914, May to September 1915, December 1926 to current year. Monthly discharge only for some periods, published in WSP 1317. Published as "near Joseph" 1911.

REVISED RECORDS.--WSP 1397: 1906. WSP 1737: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,326.86 ft (1,318.827 m) National Geodetic Vertical Datum of 1929. Nov. 12, 1903, to Sept. 25, 1915, nonrecording gage at several sites at lake outlet or near present site at different datums.

REMARKS.--Records good. Monthly discharge adjusted for storage in Wallowa Lake (see station 13326000) and diversion from Wallowa Lake by Silver Lake ditch. Silver Lake ditch diverts at Wallowa Lake dam for irrigation northeast of Joseph. City of Joseph diverts less than 1.0 ft^3/s (0.028 m^3/s) from Wallowa Lake for municipal use.

AVERAGE DISCHARGE.--51 years (water years 1928-78), 134 ft^3/s (3.795 m^3/s), 35.75 in/yr (908 mm/yr), 97,080 acre-ft/yr (120 hm^3/yr), adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,550 ft^3/s (43.9 m^3/s) June 10, 1969, gage height, 5.15 ft (1.570 m); no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 686 ft^3/s (19.4 m^3/s) July 10, gage height, 4.40 ft (1.341 m) from floodmarks; minimum, 2.3 ft^3/s (0.065 m^3/s) May 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	16	14	18	20	20	21	22	178	403	327	82
2	32	16	14	18	20	20	21	23	185	454	296	82
3	32	15	14	18	20	20	21	22	225	493	320	81
4	32	14	15	18	20	20	20	22	259	518	335	81
5	31	14	14	19	20	20	20	22	266	506	335	81
6	31	14	14	17	19	20	23	22	327	460	342	81
7	31	14	14	17	18	20	23	22	376	475	335	81
8	31	14	14	16	18	20	22	22	406	538	318	81
9	31	14	14	15	18	20	22	22	439	564	327	79
10	30	14	14	14	18	20	22	21	493	580	330	79
11	28	14	15	14	18	20	23	20	509	597	327	79
12	23	13	15	13	18	20	23	21	463	577	313	81
13	22	13	14	13	18	20	23	21	417	518	277	81
14	22	13	14	13	19	20	23	20	406	503	251	81
15	20	13	14	13	19	20	23	20	403	484	244	94
16	19	13	14	17	19	20	23	20	403	478	242	98
17	19	13	15	19	19	18	23	20	403	475	214	98
18	20	13	14	[illegible]	19	17	23	20	379	442	203	98
19	20	13	14	19	19	17	22	24	350	349	191	98
20	20	13	14	19	19	17	22	74	345	345	185	105
21	20	13	14	19	20	18	21	110	345	301	157	107
22	20	13	14	19	20	19	21	124	350	296	127	107
23	19	13	18	20	20	19	21	124	335	282	121	108
24	18	15	20	20	20	19	21	122	330	271	121	108
25	17	15	20	20	20	18	21	122	318	268	108	108
26	17	15	19	20	20	18	21	122	315	282	105	108
27	16	15	18	20	20	18	21	122	318	287	105	108
28	16	15	18	20	20	18	21	122	313	291	105	108
29	16	14	18	20	---	20	21	122	318	294	105	108
30	16	14	18	20	---	21	22	161	337	289	92	110
31	16	---	18	20	---	21	---	176	---	313	83	---
TOTAL	717	418	479	547	538	598	654	1907	10511	12973	6941	2801
MEAN	23.1	13.9	15.5	17.6	19.2	19.3	21.8	61.5	350	418	224	93.4
MAX	32	16	20	20	20	21	23	176	509	597	342	110
MIN	16	13	14	13	18	17	20	20	178	268	83	79
AC-FT	1420	829	950	1080	1070	1190	1300	3780	20850	25730	13770	5560
MEAN†	66.0	67.4	85.7	51.7	45.6	58.4	131	202	429	429	146	106
CFSM†	1.30	1.32	1.68	1.02	.90	1.15	2.57	3.97	8.43	8.43	2.87	2.08
IN†	1.50	1.48	1.94	1.17	.93	1.32	2.88	4.58	9.40	9.72	3.31	2.32
AC-FT†	4,060	4,010	5,270	3,180	2,530	3,590	7,820	12,420	25,520	26,380	8,980	6,310

CAL YR 1977 TOTAL 86,659 MEAN 73.0 MAX 298 MIN 13 AC-FT 52,880 MEAN† 76.2 CFSM† 1.50 IN† 20.3 AC-FT† 55,170
WTR YR 1978 TOTAL 39,084 MEAN 107 MAX 597 MIN 13 AC-FT 77,520 MEAN† 152 CFSM† 2.99 IN† 40.6 AC-FT† 110,100

† Adjusted for change in contents of Wallowa Lake and diversion by Silver Lake ditch.

13329500 HURRICANE CREEK NEAR JOSEPH, OR

LOCATION.--Lat 45°20'15", long 117°17'30", in NE¼ sec.3, T.3 S., R.44 E., Wallowa County, Hydrologic Unit 17060105, on left bank 350 ft (107 m) upstream from intake of Moonshine ditch, 3.5 mi (5.6 km) southwest of Joseph, and at mile 7.5 (12.1 km).

DRAINAGE AREA.--29.6 mi^2 (76.7 km^2).

PERIOD OF RECORD.--April to September 1915, April 1924 to 1978 (discontinued). Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.--WSP 1397: 1915, 1925-28. WSP 1737: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,500 ft (1,370 m), by barometer. Apr. 27 to Sept. 3, 1915, nonrecording gage at site 250 ft (76 m) downstream at different datum. Apr. 23, 1924, to June 13, 1933, water-stage recorder at site 150 ft (46 m) downstream at different datum.

REMARKS.--Records poor. No regulation or diversion above station.

AVERAGE DISCHARGE.--54 years, 74.3 ft^3/s (2.104 m^3/s), 34.09 in/yr (866 mm/yr), 53,830 acre-ft/yr (66.4 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,110 ft^3/s (31.4 m^3/s) June 9, 1948, gage height, 3.55 ft (1.082 m); maximum gage height, 6.94 ft (2.115 m) June 4, 1977, backwater from debris; minimum discharge, 2.8 ft^3/s (0.079 m^3/s) Mar. 2, 1955, result of ice jam upstream; minimum daily, 6.0 ft^3/s (0.17 m^3/s) Jan. 6, Apr. 13, 1945.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft^3/s (11.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
June 5	0230	*693	19.6	*6.45	1.966	July 11	1730	581	16.5	6.27	1.911

Minimum, 18 ft^3/s (0.51 m^3/s) Feb. 13-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	32	43	26	21	22	83	85	152	194	122	61
2	37	32	70	27	22	21	75	85	202	172	112	59
3	34	31	59	30	21	22	67	91	265	133	107	58
4	34	31	50	30	21	23	64	89	436	125	100	58
5	32	33	48	31	21	23	58	83	358	120	104	72
6	31	32	45	30	20	23	55	79	460	122	97	91
7	31	32	43	30	20	23	54	75	429	155	89	97
8	31	31	41	29	20	24	54	73	385	161	87	93
9	31	32	39	29	20	25	53	81	345	172	87	83
10	31	32	40	29	20	24	53	97	265	414	114	102
11	30	33	39	28	19	25	57	97	186	436	128	93
12	31	33	39	27	19	25	54	95	158	351	122	91
13	30	33	42	27	18	25	53	104	168	332	122	83
14	30	33	45	27	18	25	53	139	158	303	112	75
15	29	34	44	27	19	25	53	155	136	281	117	68
16	30	33	40	27	19	26	53	139	122	276	120	59
17	29	31	40	27	19	27	53	125	120	251	107	57
18	29	31	39	27	19	28	53	117	136	241	102	55
19	28	30	36	25	20	29	53	114	148	223	100	55
20	28	29	34	25	20	30	53	128	172	219	95	54
21	28	28	35	24	20	32	53	155	172	214	93	50
22	29	30	35	24	20	34	51	183	186	210	100	49
23	28	30	35	24	20	36	51	158	223	206	95	45
24	28	31	34	22	21	36	51	145	206	206	91	43
25	35	59	34	24	21	36	53	133	155	206	91	39
26	34	89	33	24	21	38	61	122	120	198	89	37
27	32	54	31	22	22	41	104	120	133	198	87	34
28	31	49	29	23	21	46	95	139	190	186	77	34
29	32	49	31	22	---	53	91	155	236	161	68	33
30	32	44	31	21	---	64	87	145	232	136	65	32
31	31	---	30	21	---	70	---	142	---	131	67	---
TOTAL	964	1101	1234	809	562	981	1848	3648	6654	6733	3067	1860
MEAN	31.1	36.7	39.8	26.1	20.1	31.6	61.6	118	222	217	98.9	62.0
MAX	38	89	70	31	22	70	104	183	460	436	128	102
MIN	28	28	29	21	18	21	51	73	120	120	65	32
CFSM	1.05	1.24	1.35	.88	.68	1.07	2.08	3.99	7.50	7.33	3.34	2.10
IN.	1.21	1.38	1.55	1.02	.71	1.23	2.32	4.58	8.36	8.46	3.85	2.34
AC-FT	1910	2180	2450	1600	1110	1950	3670	7240	13200	13350	6080	3690

CAL YR 1977 TOTAL 14637 MEAN 40.1 MAX 241 MIN 12 CFSM 1.36 IN 18.39 AC-FT 29030
WTR YR 1978 TOTAL 29461 MEAN 80.7 MAX 460 MIN 18 CFSM 2.73 IN 37.02 AC-FT 58440

13329900 WALLOWA RIVER AT WALLOWA, OR

LOCATION.--Lat 45°33'20", long 117°28'45", in SW¼NW¼ sec.20, T.1 N., R.43 E., Wallowa County, Hydrologic Unit 17060105, on right bank upstream side of bridge on county road 2.8 mi (4.5 km) east of Wallowa, and at mile 26.5 (42.6 km).

DRAINAGE AREA.--Indeterminate.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: May 1976 to December 1977 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--
WATER TEMPERATURES: Maximum, 21.5°C July 27, 1977; minimum recorded, 0.0°C Jan. 5, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 12.5°C Oct. 3, 16; minimum, 1.0°C Nov. 21.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.5	7.5	8.5	7.0	7.0	5.0						
2	12.0	7.5	8.5	6.5	8.0	7.0						
3	12.5	9.5	7.0	4.5	7.5	6.0						
4	11.5	7.0	8.0	5.0	5.5	4.0						
5	11.0	7.5	8.5	7.5	5.5	3.5						
6	10.5	9.0	8.5	6.5	6.5	4.5						
7	11.0	9.5	8.0	5.5	6.0	2.5						
8	11.5	7.5	6.0	4.0	4.0	2.5						
9	10.5	9.5	7.0	5.0	4.5	3.0						
10	10.5	7.5	8.0	6.0	6.0	4.5						
11	11.0	6.5	7.5	5.5	7.0	5.5						
12	11.5	7.0	8.5	6.5	6.5	5.5						
13	12.0	9.0	8.0	6.5	7.5	6.0						
14	12.0	8.0	8.0	6.0	7.5	7.0						
15	12.0	8.0	8.0	7.0	7.0	4.5						
16	12.5	9.0	7.0	5.0	5.0	3.5						
17	11.5	7.5	5.0	4.0	5.0	4.5						
18	11.5	7.5	4.5	3.0	4.5	4.0						
19	11.5	8.5	5.0	3.0	4.0	2.5						
20	10.5	7.0	3.5	1.5	---	---						
21	10.0	7.0	3.0	1.0	---	---						
22	10.0	6.5	4.0	1.5	---	---						
23	10.0	8.0	6.5	4.0	---	---						
24	11.5	7.5	6.5	6.0	---	---						
25	11.0	9.5	7.0	6.5	---	---						
26	10.0	8.0	7.0	5.5	---	---						
27	8.5	6.5	6.0	5.0	---	---						
28	10.0	7.5	7.0	5.5	---	---						
29	10.5	8.5	7.5	5.0	---	---						
30	9.5	7.5	5.5	3.5	---	---						
31	8.5	7.0	---	---	---	---						
MONTH	12.5	6.5	8.5	1.0	8.0	2.5						

13330000 LOSTINE RIVER NEAR LOSTINE, OR

LOCATION.--Lat 45°26'20", long 117°25'35", in NW¼ sec.34, T.1 S., R.43 E., Wallowa County, Hydrologic Unit 17060105, on left bank 3.5 mi (5.6 km) south of Lostine and at mile 10.0 (16.1 km).

DRAINAGE AREA.--70.9 mi^2 (183.6 km^2).

PERIOD OF RECORD.--August 1912 to March 1914, April to September 1915, July 1925 to current year. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.--WSP 1397: 1913, 1942. WSP 1737: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,650 ft (1,110 m), by barometer. See WSP 1317 or 1737 for history of changes prior to Dec. 16, 1953.

REMARKS.--Records excellent. Minam Lake Reservoir, capacity, 440 acre-ft (0.54 hm^3), has stored and diverted flow from Minam River since 1917 for irrigation in Lostine River basin. Diversions for irrigation above station.

AVERAGE DISCHARGE.--54 years (water years 1913, 1926-78), 196 ft^3/s (5.551 m^3/s), 142,000 acre-ft/yr (175 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,550 ft^3/s (72.2 m^3/s) June 16, 1974, gage height, 7.55 ft (2.301 m); minimum, 7.5 ft^3/s (0.21 m^3/s) Mar. 2, 1966, result of freezeup; minimum daily, 10 ft^3/s (0.28 m^3/s) Nov. 28-30, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,100 ft^3/s (31.2 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
June 5	2400	1,360	38.5	6.62	2.018	July 10	0200	*1,440	40.8	*6.79	2.070
June 29	2130	1,240	35.1	6.37	1.942						

Minimum recorded, 25 ft^3/s (0.71 m^3/s) Mar. 2, but may have been less during period of no gage-height record Nov. 20-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	70	148	60	47	43	304	308	474	1000	261	92
2	118	74	319	64	46	39	265	306	596	937	237	88
3	107	64	317	75	49	44	227	326	767	836	222	84
4	97	67	231	73	47	44	211	311	959	791	211	82
5	89	70	189	74	48	44	191	281	1120	747	216	90
6	84	66	175	70	50	44	205	259	1220	757	202	132
7	89	64	156	67	49	45	193	239	1180	818	181	146
8	84	59	138	67	48	50	181	235	1160	918	165	154
9	82	62	131	66	48	53	170	271	1170	978	156	126
10	76	61	126	66	46	50	177	367	989	1210	153	194
11	73	59	122	63	46	50	205	362	750	918	142	165
12	72	58	116	62	43	50	196	321	682	753	138	153
13	71	54	153	60	46	47	191	381	714	710	181	137
14	69	59	203	61	44	47	182	537	717	757	154	125
15	65	70	207	61	44	45	179	626	638	818	162	116
16	61	66	172	59	43	47	181	515	572	780	200	108
17	59	61	154	58	41	49	169	434	575	632	156	104
18	57	53	138	56	43	54	161	386	666	563	134	101
19	55	48	124	55	42	60	157	386	760	518	121	97
20	53	35	106	54	42	70	164	450	878	482	114	95
21	52	26	115	53	42	79	154	552	940	463	109	89
22	50	48	105	53	42	93	149	650	1000	442	119	84
23	49	52	101	48	43	111	146	535	1070	453	116	82
24	49	59	98	46	45	112	143	458	1000	458	104	77
25	79	170	93	52	46	108	154	394	864	455	112	74
26	89	344	87	51	46	115	196	346	694	437	109	71
27	73	220	80	49	45	140	439	324	753	416	102	69
28	71	179	76	50	44	170	386	404	944	389	98	66
29	70	175	86	48	---	211	344	485	1090	339	94	65
30	69	153	79	44	---	259	319	450	1080	304	92	63
31	69	---	70	49	---	265	---	424	---	275	101	---
TOTAL	2313	2651	4417	1814	1265	2638	6339	12323	26022	20354	4662	3129
MEAN	74.6	88.4	142	58.5	45.2	85.1	211	398	867	657	150	104
MAX	132	344	319	75	50	265	439	650	1220	1210	261	194
MIN	49	26	70	44	41	39	143	235	474	275	92	63
AC-FT	4590	5260	8760	3600	2510	5230	12570	24440	51610	40370	9250	6210

CAL YR 1977 TOTAL 39368 MEAN 108 MAX 1000 MIN 16 AC-FT 78090
WTR YR 1978 TOTAL 87927 MEAN 241 MAX 1220 MIN 26 AC-FT 174400

13330200 LOSTINE RIVER AT LOSTINE, OR

LOCATION.--Lat 45°29'47", long 117°26'20", in NE¼ sec.9, T.1 S., R.43 E., Wallowa County, Hydrologic Unit 17060105, on right bank at upstream side of bridge on Oregon State Highway 82, 0.5 mi (0.8 km) northeast of Lostine, and at mile 31.3 (50.4 km).

DRAINAGE AREA.--Indeterminate.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: May 1976 to December 1977 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 21.0°C July 20, 23, 1977; minimum, 0.0°C many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 10.5°C Oct. 16; minimum, 0.0°C Nov. 20-22.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.0	5.0	6.0	4.0	4.5	2.0						
2	9.0	5.0	6.0	4.0	5.0	4.0						
3	10.0	6.5	4.5	2.0	4.5	4.0						
4	8.5	5.0	5.0	2.0	4.0	2.0						
5	8.0	5.0	5.5	4.5	3.0	1.5						
6	8.5	6.5	5.5	4.0	4.0	2.0						
7	8.5	6.5	5.0	3.0	3.5	0.5						
8	9.0	5.0	3.5	1.0	1.5	0.5						
9	8.5	6.5	4.0	2.0	1.5	0.5						
10	8.5	5.0	5.0	2.5	3.0	1.5						
11	8.0	4.0	5.0	3.0	4.5	2.5						
12	9.0	5.0	6.0	4.0	4.0	3.0						
13	9.5	6.5	5.5	3.5	5.0	3.5						
14	10.0	6.0	5.5	3.0	5.0	4.5						
15	9.5	6.0	5.5	4.5	---	4.0						
16	10.5	6.5	4.0	2.5	---	---						
17	9.5	5.5	3.0	1.0	---	---						
18	9.5	5.5	1.5	0.5	---	---						
19	9.5	6.5	1.5	0.5	---	---						
20	8.5	5.0	1.0	0.0	---	---						
21	8.0	5.0	0.0	0.0	---	---						
22	8.0	4.5	0.5	0.0	---	---						
23	8.0	5.5	2.5	0.5	---	---						
24	9.5	5.5	3.5	2.5	---	---						
25	9.0	7.5	4.0	2.0	---	---						
26	7.0	5.5	3.0	1.5	---	---						
27	6.0	4.5	3.5	2.0	---	---						
28	7.5	5.0	4.0	3.0	---	---						
29	8.5	6.5	5.0	2.0	---	---						
30	7.0	5.0	2.5	1.0	---	---						
31	6.0	4.0	---	---	---	---						
MONTH	10.5	4.0	6.0	0.0	5.0	0.5						

13330500 BEAR CREEK NEAR WALLOWA, OR

LOCATION.--Lat 45°31'37", long 117°33'05", in NW¼NE¼ sec.34, T.1 N., R.42 E., Wallowa County, Hydrologic Unit 17060105, on right bank 30 ft (9 m) downstream from road bridge, 3.0 mi (4.8 km) southwest of Wallowa, and at mile 4.4 (7.1 km).

DRAINAGE AREA.--68 mi^2 (176 km^2), approximately.

PERIOD OF RECORD.--April to September 1915, April 1924 to current year. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.--WSP 1397: 1915, 1927, 1929-30, 1932, 1936-40, 1945, 1949.

GAGE.--Water-stage recorder. Altitude of gage is 3,250 ft (991 m), by barometer. Apr. 13 to Sept. 16, 1915, nonrecording gage at site 1.0 mi (1.6 km) upstream at different datum. Apr. 22, 1924, to Nov. 2, 1931, water-stage recorder at site 1.5 mi (2.4 km) upstream at different datum.

REMARKS.--Records good. No regulation. Diversions for irrigation above station. Water for irrigation in Lostine River basin diverted from Little Bear Creek, a tributary above station, in sec.32, T.1 S., R.43 E.

AVERAGE DISCHARGE.--54 years (water years 1925-78), 114 ft^3/s (3.228 m^3/s), 82,590 acre-ft/yr (102 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,730 ft^3/s (49.0 m^3/s) June 15, 1974; maximum gage height, 3.82 ft (1.164 m) Apr. 22, 1936 (from floodmark); minimum daily discharge, 3 ft^3/s (0.085 m^3/s) Jan. 20, Feb. 1, 1937.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 600 ft^3/s (17.0 m^3/s) and maximum discharge, 841 ft^3/s (23.8 m^3/s) June 5, gage height, 2.87 ft (0.875 m); minimum, 18 ft^3/s (0.510 m^3/s) Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	41	147	46	33	58	395	300	326	389	41	22
2	55	51	315	56	33	53	331	281	420	371	37	20
3	50	46	371	64	34	51	265	273	533	348	36	19
4	44	47	277	69	32	51	232	246	629	326	33	19
5	40	47	225	64	34	50	205	215	711	300	31	20
6	37	46	201	51	38	47	191	188	711	290	29	25
7	40	45	178	46	40	46	178	171	645	305	27	39
8	37	40	159	46	44	55	165	165	614	337	25	51
9	38	41	144	45	46	71	162	191	622	348	24	41
10	36	40	133	47	43	83	174	273	519	383	23	53
11	33	39	125	45	43	88	215	281	427	300	22	57
12	33	39	118	45	39	85	212	246	383	258	23	57
13	33	40	165	45	39	79	198	290	395	236	34	51
14	32	41	305	46	37	72	184	440	383	236	33	47
15	30	53	342	46	37	66	174	499	342	239	36	45
16	29	55	281	49	35	61	171	407	290	215	54	40
17	28	51	239	51	33	61	156	326	290	174	40	40
18	26	49	198	51	33	74	147	281	342	156	35	39
19	24	47	171	51	34	94	144	277	395	141	31	38
20	24	33	141	51	33	123	150	315	427	128	29	37
21	23	20	136	47	33	141	141	401	433	118	28	36
22	22	25	118	47	36	165	139	473	453	105	31	34
23	21	32	111	43	43	188	131	401	486	98	34	33
24	21	54	105	41	51	184	128	326	453	92	28	31
25	40	181	96	44	55	174	139	269	395	85	27	29
26	55	321	85	41	61	178	181	236	326	76	26	28
27	45	222	81	39	63	212	473	222	353	69	24	26
28	43	184	74	38	63	243	519	273	414	63	23	26
29	43	178	77	37	---	290	427	331	427	55	21	24
30	41	156	69	34	---	342	353	305	420	50	21	24
31	41	---	60	34	---	348	---	285	---	45	24	---
TOTAL	1125	2264	5247	1459	1145	3833	6680	9187	13564	6336	930	1051
MEAN	36.3	75.5	169	47.1	40.9	124	223	296	452	204	30.0	35.0
MAX	61	321	371	69	63	348	519	499	711	389	54	57
MIN	21	20	60	34	32	46	128	165	290	45	21	19
AC-FT	2230	4490	10410	2890	2270	7600	13250	18220	26900	12570	1840	2080

CAL YR 1977 TOTAL 24243.3 MEAN 66.4 MAX 466 MIN 8.6 AC-FT 48090

WTR YR 1978 TOTAL 52821.0 MEAN 145 MAX 711 MIN 19 AC-FT 104800

13331500 MINAM RIVER AT MINAM, OR
(Hydrologic bench-mark station)

LOCATION.--Lat 45°37'12", long 117°43'32", in SW¼SW¼ sec.29, T.2 N., R.41 E., Wallowa County, Hydrologic Unit 17060105, on left bank 2.3 mi (3.7 km) downstream from Squaw Creek, 0.3 mi (0.5 km) west of Minam, and at mile 0.3 (0.5 km).

DRAINAGE AREA.--240 mi^2 (622 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1912 to March 1914, September 1965 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Datum of gage is 2,540.48 ft (774.338 m) National Geodetic Vertical Datum of 1929. June 1912 to March 1914, nonrecording gage at approximately same site at different datum.

REMARKS.--Water-discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--14 years, 480 ft^3/s (13.59 m^3/s), 27.16 in/yr (690 mm/yr), 347,800 acre-ft/yr (429 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,260 ft^3/s (177 m^3/s) June 16, 1974, gage height, 6.89 ft (2.100 m); maximum gage height, 7.3 ft (2.23 m) May 28, 1913, datum then in use; minimum discharge, 10 ft^3/s (0.28 m^3/s) Dec. 6, 1972, Jan. 10, 1973, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,450 ft^3/s (41.1 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 3	0030	1,800	51.0	3.78	1.152	June 7	0030	*2,600	73.6	*4.50	1.372
Apr. 27	2030	2,080	58.9	4.05	1.234						

Minimum, 52 ft^3/s (1.47 m^3/s) Nov. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	132	401	180	207	247	1280	1100	1150	1630	333	134
2	166	147	839	203	203	239	1180	1080	1300	1510	312	129
3	153	137	1430	283	214	235	1010	1080	1580	1360	291	122
4	142	137	979	278	221	231	929	1000	1930	1300	274	119
5	135	142	763	270	224	231	858	914	2170	1240	270	122
6	127	145	663	262	299	221	837	844	2410	1190	258	207
7	132	142	592	254	329	217	824	790	2370	1260	243	217
8	132	135	530	254	347	278	783	776	2280	1340	228	254
9	127	127	476	266	329	404	770	844	2300	1340	214	207
10	123	132	455	291	295	429	790	1080	2060	1590	207	299
11	118	130	444	291	287	394	865	1090	1690	1320	197	283
12	113	127	434	287	247	356	817	994	1510	1130	193	262
13	111	132	712	287	239	320	763	1030	1500	1040	228	235
14	109	135	1260	291	224	295	712	1290	1480	1030	239	224
15	104	169	1270	299	214	262	675	1480	1350	1090	210	210
16	102	202	994	308	200	258	694	1350	1240	1080	316	197
17	98	178	790	333	187	254	633	1210	1160	914	239	190
18	96	153	651	347	193	291	598	1130	1290	824	214	190
19	94	127	558	338	187	342	598	1110	1350	763	193	180
20	92	106	444	316	190	419	627	1210	1540	694	183	177
21	90	65	455	303	193	444	604	1370	1630	651	177	170
22	90	123	439	295	214	497	586	1640	1680	609	177	161
23	90	164	409	274	235	575	563	1470	1820	592	200	155
24	90	166	394	221	274	563	552	1290	1760	580	170	149
25	100	249	370	258	299	508	580	1150	1600	558	158	143
26	172	914	360	254	316	513	694	1020	1310	546	155	137
27	127	583	338	224	303	657	1620	950	1280	513	149	132
28	120	472	312	228	278	776	1790	1040	1480	486	140	129
29	125	462	351	217	---	886	1400	1190	1640	439	134	127
30	135	443	320	203	---	1050	1230	1140	1710	394	132	124
31	132	---	278	210	---	1050	---	1080	---	356	140	---
TOTAL	3729	6476	18711	8325	6946	13442	25862	34742	49570	29369	6574	5385
MEAN	120	216	604	269	248	434	862	1121	1652	947	212	180
MAX	184	914	1430	347	347	1050	1790	1640	2410	1630	333	299
MIN	90	65	278	180	187	217	552	776	1150	356	132	119
CFSM	.50	.90	2.52	1.12	1.03	1.81	3.59	4.67	6.88	3.95	.88	.75
IN.	.58	1.00	2.90	1.29	1.08	2.08	4.01	5.38	7.68	4.55	1.02	.83
AC-FT	7400	12850	37110	16510	13780	26660	51300	68910	98320	58250	13040	10680

CAL YR 1977 TOTAL 90988 MEAN 249 MAX 1700 MIN 46 CFSM 1.04 IN 14.10 AC-FT 180500
WTR YR 1978 TOTAL 209133 MEAN 573 MAX 2410 MIN 65 CFSM 2.39 IN 32.42 AC-FT 414800

13331500 MINAM RIVER AT MINAM, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1965 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 27.0°C July 23, 27, 1977; minimum, 0.0°C on many days during winter periods each year.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 23.5°C Aug. 9; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT									
17...	0930	100	6.0	7.4	12.6	46	--	--	--
NOV									
01...	1300	125	4.5	7.5	12.2	45	--	--	59
29...	0930	624	5.0	7.1	13.0	47	55	K10	55
DEC									
05...	0945	150	.2	6.6	12.6	50	--	--	--
JAN									
09...	1045	235	3.0	7.5	12.8	50	K15	K4	--
FEB									
06...	1030	319	3.1	7.3	13.7	55	260	K2	K11
MAR									
06...	1030	225	4.5	7.8	13.5	55	40	<1	64
MAY									
04...	1020	907	4.0	7.2	12.3	44	56	K20	K4
JUN									
05...	1215	2200	8.5	6.8	12.8	25	K11	K3	K26
JUL									
05...	1000	1290	8.5	6.8	12.5	25	120	K4	41
AUG									
07...	1000	242	16.0	7.2	10.5	34	220	--	K590
SEP									
15...	0915	215	9.2	7.1	10.9	39	48	K4	K12

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT									
17...	15	6.1	1.4	2.2	1.0	23	3.7	.5	.0
NOV									
01...	15	5.4	1.2	2.3	1.1	21	1.5	.4	.0
29...	22	6.2	--	2.0	1.1	22	1.9	.9	.1
DEC									
05...	19	5.5	1.5	2.1	1.3	18	2.9	.6	.0
JAN									
09...	22	6.3	1.6	2.4	1.3	25	1.6	.4	.0
FEB									
06...	24	6.2	1.8	2.5	1.2	26	2.5	.6	.0
MAR									
06...	23	6.3	1.9	2.4	1.2	26	3.0	1.1	.0
MAY									
04...	19	6.2	1.4	1.6	.9	21	1.6	.5	.0
JUN									
05...	11	2.8	.8	1.2	.7	11	3.0	.3	.0
JUL									
05...	9.8	3.9	.5	1.2	.6	10	2.3	.2	.0
AUG									
07...	12	5.6	.8	1.9	1.0	16	1.2	.2	.0
SEP									
15...	13	5.7	1.1	1.9	.9	18	2.3	.3	.0

13331500 MINAM RIVER AT MINAM, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT									
17...	.03	.07	21	0	38	44	10.3	8	2.2
NOV									
01...	.01	.02	18	0	41	40	13.8	8	2.7
29...	.18	.05	--	--	61	--	69.8	12	14
DEC									
05...	.08	.00	20	2	51	44	20.7	--	--
JAN									
09...	.02	.05	22	0	52	50	33.0	8	5.1
FEB									
06...	.01	.05	23	0	58	55	50.0	12	10
MAR									
06...	.03	.02	24	0	54	55	32.8	9	5.5
MAY									
04...	.02	.04	21	0	35	44	85.7	7	17
JUN									
05...	.01	.05	10	0	25	26	149	94	558
JUL									
05...	.00	.01	12	2	20	25	69.7	6	21
AUG									
07...	.01	.00	17	1	31	32	20.3	8	5.2
SEP									
15...	.01	.01	19	1	29	36	16.8	4	2.3

DATE	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
OCT							
17...	--	500	<10	0	<10	210	<100
MAY							
04...	1	0	2	0	10	230	16

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	SELE- NIUM, TOTAL (UG/L AS SE)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	CYANIDE TOTAL (MG/L AS CN)
OCT						
17...	8	<10	10	--	--	.00
MAY						
04...	0	0	10	0	.0	.00

13331500 MINAM RIVER AT MINAM, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTORER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	6.5	6.0	4.0	4.5	2.0	---	---	2.5	1.0	5.0	1.5
2	11.0	5.5	6.5	3.5	5.0	4.5	---	---	4.0	2.0	5.0	.0
3	11.5	6.5	5.0	1.5	5.0	4.5	---	---	6.0	3.0	2.5	.5
4	10.5	4.5	4.5	1.0	5.0	3.0	---	---	3.5	2.0	3.0	2.0
5	9.5	5.0	5.5	3.5	3.5	3.0	---	---	4.0	2.5	5.0	2.5
6	10.0	6.0	6.5	3.5	4.0	2.5	---	---	5.0	3.0	8.0	3.5
7	10.5	7.5	6.0	3.0	4.0	2.0	---	---	4.0	3.5	5.0	3.0
8	11.0	7.0	4.0	1.0	2.0	1.0	---	---	5.0	2.5	5.5	4.5
9	10.0	8.0	3.5	1.0	2.0	.5	---	---	4.0	3.0	7.0	4.5
10	10.5	5.5	4.5	1.5	3.5	2.0	---	---	---	---	6.0	3.0
11	10.0	4.0	---	1.0	4.5	3.0	---	---	2.5	1.5	5.0	3.0
12	10.5	4.0	6.0	2.5	4.5	3.5	---	---	2.5	.0	5.0	3.0
13	10.0	6.0	5.0	3.5	5.0	4.0	---	---	3.0	.5	4.0	2.0
14	12.0	6.5	5.0	2.5	5.5	5.0	---	---	4.5	2.0	5.5	2.0
15	11.5	6.0	5.5	4.5	5.5	4.0	---	---	3.5	2.0	7.0	1.0
16	12.0	6.5	4.5	2.0	4.0	3.5	---	---	3.5	1.0	7.5	1.5
17	11.0	5.5	2.5	.5	---	---	---	---	3.0	.5	9.0	2.5
18	10.5	4.5	1.0	.0	---	---	---	---	3.0	1.0	9.5	4.0
19	10.5	5.5	.5	.0	---	---	4.0	---	6.0	3.0	9.0	4.0
20	9.5	4.5	.0	.0	---	---	5.0	3.5	6.0	3.0	8.5	4.0
21	9.0	4.0	---	.0	---	---	4.5	3.0	6.5	2.5	8.5	3.5
22	9.0	4.0	.0	.0	---	---	3.5	2.0	4.5	2.0	9.0	4.5
23	8.0	5.0	.0	.0	---	---	2.5	.0	6.0	3.0	6.0	4.5
24	11.0	4.5	.0	.0	---	---	1.0	.0	4.5	3.5	7.5	3.5
25	9.0	8.0	2.0	.0	---	---	1.5	.0	5.5	4.0	9.5	5.0
26	9.0	6.0	3.5	1.0	---	---	3.5	1.5	5.5	3.5	10.0	4.5
27	6.0	5.0	4.0	2.5	---	---	2.5	.0	5.5	3.5	9.5	5.5
28	7.0	5.0	4.5	3.5	---	---	2.5	1.5	6.0	2.5	9.0	5.5
29	9.5	4.5	5.5	3.0	---	---	4.0	1.5	---	---	9.5	5.0
30	7.0	5.5	3.5	2.0	---	---	2.0	.0	---	---	7.5	5.5
31	6.0	4.5	---	---	---	---	1.5	.0	---	---	8.0	5.5
MONTH	12.0	4.0	6.5	.0	5.5	.5	5.0	.0	6.5	.0	10.0	.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMRER	
1	6.5	4.5	8.5	6.0	---	---	10.0	8.0	20.5	13.0	21.0	13.0
2	5.0	3.5	9.5	6.0	---	---	10.0	8.0	21.0	13.0	21.5	13.5
3	6.5	3.5	7.0	5.5	---	---	10.5	8.0	22.0	14.0	22.0	14.0
4	4.5	3.5	6.0	4.0	---	---	10.0	8.0	22.0	14.5	21.0	14.0
5	5.0	3.5	6.0	3.5	---	---	11.5	8.0	23.0	16.0	17.5	15.0
6	4.0	2.5	8.0	5.0	---	---	13.5	8.5	22.5	15.0	17.0	14.5
7	5.5	3.0	10.5	4.5	---	---	11.5	9.5	22.5	14.5	14.5	11.0
8	7.5	4.0	11.0	5.0	---	---	12.5	8.5	22.5	14.0	15.0	9.5
9	8.5	3.5	9.5	7.0	8.5	---	12.0	9.5	23.5	15.5	13.5	10.0
10	9.5	4.5	---	---	7.5	6.0	12.0	9.5	22.5	14.5	12.5	10.5
11	8.0	5.0	---	---	9.0	5.5	12.0	8.0	21.0	14.5	12.5	9.5
12	7.5	3.0	---	---	8.0	6.5	13.5	9.0	17.0	14.5	12.0	8.5
13	7.0	3.0	---	---	8.0	6.5	15.0	10.0	14.0	11.5	12.5	8.0
14	8.0	5.0	---	---	8.5	6.5	16.0	11.0	18.5	10.5	14.5	9.0
15	8.5	5.0	---	---	9.0	6.0	15.0	12.0	15.5	13.0	13.5	9.5
16	6.5	4.0	---	---	9.0	5.5	13.0	11.0	15.0	11.5	13.5	8.0
17	7.5	2.5	---	---	11.5	6.0	15.0	10.0	13.5	10.5	10.0	6.5
18	8.0	3.5	---	---	10.0	7.0	15.5	10.5	17.5	9.0	10.5	6.5
19	8.5	4.5	---	---	11.5	7.5	15.0	11.0	16.0	12.0	---	---
20	7.0	5.0	---	---	11.5	6.5	16.0	11.0	15.0	12.0	---	---
21	7.0	4.0	---	---	9.5	6.5	16.5	10.5	19.0	11.5	---	---
22	7.5	3.5	---	---	10.0	7.0	18.0	11.5	15.0	12.0	---	---
23	8.5	3.5	---	---	10.0	7.0	18.5	13.0	17.0	10.5	---	---
24	9.5	5.5	---	---	9.5	7.0	19.5	13.5	17.5	12.5	---	---
25	9.0	7.0	---	---	8.0	6.5	19.5	13.0	16.0	12.5	---	---
26	8.0	7.0	---	---	11.0	5.5	20.0	14.5	18.0	11.0	---	---
27	7.0	5.5	---	---	12.5	7.5	20.5	14.0	19.0	10.0	---	---
28	7.0	5.5	---	---	11.5	8.5	20.0	13.5	20.0	10.5	---	---
29	9.0	5.5	---	---	11.5	8.0	20.0	13.5	21.0	12.0	---	---
30	9.0	5.0	---	---	10.5	8.0	20.0	13.0	17.5	14.0	---	---
31	---	---	---	---	---	---	20.5	13.5	18.0	13.0	---	---
MONTH	9.5	2.5	11.0	3.5	12.5	5.5	20.5	8.0	23.5	9.0	22.0	6.5

13332500 GRANDE RONDE RIVER AT RONDOWA, OR

LOCATION.--Lat 45°43'36", long 117°46'59", in SW¼NW¼ sec.23, T.3 N., R.40 E., Wallowa County, Hydrologic Unit 17060106, on right bank at Rondowa, 500 ft (152 m) downstream from Wallowa River, 13 mi (21 km) northeast of Elgin, and at mile 81.4 (131.0 km).

DRAINAGE AREA.--2,555 mi² (6,617 km²).

PERIOD OF RECORD.--October 1926 to current year.

REVISED RECORDS.--WSP 1093: 1928-29, 1932-33, 1936, 1938, 1939(M), 1943. WSP 1397: 1927. WSP 1447: 1927.

GAGE.--Water-stage recorder. Datum of gage is 2,281.87 ft (695.514 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Flow slightly regulated by Wallowa Lake (see station 13326000) and small reservoirs. Diversions for irrigation above station, chiefly in vicinity of La Grande, Enterprise, and Wallowa; one transbasin diversion from Sheep Creek in Imnaha River basin for irrigation in Wallowa Valley.

AVERAGE DISCHARGE.--52 years, 2,145 ft³/s (60.75 m³/s), 1,554,000 acre-ft/yr (1.92 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,700 ft³/s (700 m³/s) Jan. 30, 1965, gage height, 10.93 ft (3.331 m); minimum, 179 ft³/s (5.07 m³/s) Aug. 24, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,200 ft³/s (176 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 2	1930	10,000	283	6.39	1.948	Apr. 27	1800	10,100	286	6.43	1.960
Dec. 14	1730	*10,700	303	*6.65	2.027	June 7	0230	6,690	189	5.06	1.542
Apr. 1	1200	7,470	212	5.41	1.649						

Minimum daily, 470 ft³/s (13.3 m³/s) Nov. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1010	739	2340	1310	1580	2810	7020	7040	3600	4210	932	712
2	922	783	6480	1150	1590	2510	6920	6590	3800	4150	829	645
3	866	765	7720	1470	2020	2340	6380	6250	4260	4100	765	628
4	801	739	5780	1620	1990	2280	5990	5800	4960	3970	721	604
5	747	765	4340	1740	1920	2400	5680	5310	5730	3810	704	587
6	721	774	3730	1930	2590	2480	5640	4800	6280	3620	670	783
7	765	739	3330	1840	2950	2420	5710	4360	6210	3730	645	1040
8	774	712	2880	1820	3100	2810	5240	4070	5990	4080	595	1340
9	765	687	2540	1930	3000	3890	4800	4020	6080	4110	540	1150
10	747	687	2370	2050	2780	4210	4510	4670	5610	4920	516	1270
11	704	678	2380	2130	2570	4030	4510	4830	4850	4280	522	1280
12	678	661	2420	2090	2340	3800	4260	4540	4360	3710	548	1190
13	653	678	5820	2100	2130	3440	4020	4670	4300	3400	765	1130
14	636	712	9600	2130	2060	3130	3880	5360	4280	3270	885	1080
15	612	866	9440	2320	1960	2810	3730	6080	3950	3330	792	1020
16	595	951	7430	2630	1840	2600	3770	5780	3640	3270	1120	990
17	579	885	6040	3000	1700	2540	3750	5220	3310	2850	1010	990
18	571	820	4870	3130	1640	2680	3560	4800	3620	2570	961	980
19	563	712	3970	2950	1620	2960	3470	4580	3710	2320	922	961
20	556	600	3190	2730	1720	3350	3510	4670	4020	2060	903	951
21	548	470	2830	2620	1800	3560	3450	5030	4190	1910	894	941
22	540	640	2570	2600	1880	3800	3350	5820	4320	1720	894	913
23	534	740	2430	2340	1970	4130	3270	5290	4710	1650	970	894
24	528	848	2420	2030	2260	4240	3190	4780	4540	1630	932	866
25	571	1410	2430	1930	2950	4050	3190	4340	4240	1520	913	848
26	838	3510	2450	1920	3350	4070	3380	3990	3660	1390	894	820
27	712	2730	2320	1810	3380	4450	7500	3730	3550	1260	866	792
28	712	2520	2120	1720	3120	4850	9080	3750	3910	1190	829	783
29	721	2460	2070	1720	---	5220	8250	4020	4280	1140	801	774
30	739	2380	2050	1620	---	5780	7650	3830	4340	1060	747	756
31	730	---	1850	1590	---	5850	---	3620	---	990	730	---
TOTAL	21438	32661	122210	63970	63810	109490	148660	151640	134300	87220	24815	27708
MEAN	692	1089	3942	2064	2279	3532	4955	4892	4477	2814	800	924
MAX	1010	3510	9600	3130	3380	5850	9080	7040	6280	4920	1120	1340
MIN	528	470	1850	1150	1580	2280	3190	3620	3310	990	516	587
AC-FT	42520	64780	242400	126900	126600	217200	294900	300800	266400	173000	49220	54960

CAL YR 1977 TOTAL 436675 MEAN 1196 MAX 9600 MIN 186 AC-FT 866100
WTR YR 1978 TOTAL 987922 MEAN 2707 MAX 9600 MIN 470 AC-FT 1960000

13333000 GRANDE RONDE RIVER AT TROY, OR

LOCATION.--Lat 45°56'47", long 117°26'54", in NE¼NW¼ sec.4, T.5 N., R.43 E., Wallowa County, Hydrologic Unit 17060106, on left bank 500 ft (152 m) downstream from bridge at Troy, 600 ft (183 m) downstream from Wenaha River, and at mile 45.2 (72.7 km).

DRAINAGE AREA.--3,275 mi² (8,482 km²).

PERIOD OF RECORD.--August 1944 to current year. Monthly discharge only August 1944, published in WSP 1317.

REVISED RECORDS.--WSP 1397: 1946(M), 1948-50.

GAGE.--Water-stage recorder. Datum of gage is 1,585.98 ft (483.407 m) National Geodetic Vertical Datum of 1929. Aug. 17, 1944, to Sept. 30, 1949, nonrecording gage at site 500 ft (152 m) upstream at datum 10.85 ft (3.307 m) lower. Oct. 1, 1949, to Sept. 5, 1963, water-stage recorder at site 500 ft (152 m) upstream at datum 1.15 ft (0.351 m) higher.

REMARKS.--Records excellent. Flow slightly regulated by Wallowa Lake (see station 13326000) and small reservoirs. Diversions for irrigation above station, chiefly in vicinity of La Grande, Enterprise, and Wallowa; one transbasin diversion from Big Sheep Creek and tributaries in Imnaha River basin for irrigation in Wallowa Valley.

AVERAGE DISCHARGE.--34 years, 3,131 ft³/s (88.67 m³/s), 2,268,000 acre-ft/yr (2.80 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,200 ft³/s (1,200 m³/s) Dec. 23, 1964, gage height, 11.25 ft (3.429 m); minimum, 344 ft³/s (9.74 m³/s) Aug. 19-21, 23, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s (255 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 2	2200	19,400	549	8.36	2.548	Apr. 1	1630	9,860	279	6.35	1.935
Dec. 14	2130	*22,900	649	*9.00a	2.743	Apr. 27	2200	12,400	351	6.95	2.118

Minimum, 712 ft³/s (20.2 m³/s) Aug. 10, 11.

a From floodmark.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1280	997	3280	2040	2280	4110	9120	8450	4390	4830	1190	954
2	1160	1060	11000	1670	2300	3680	9080	7800	4610	4770	1100	879
3	1080	1080	15100	2040	2660	3400	8280	7330	5110	4770	1020	854
4	1010	997	10100	2260	2940	3240	7560	6860	5760	4640	954	918
5	951	1010	7450	2380	2810	3270	7290	6410	6220	4470	928	806
6	905	1030	5970	2570	3500	3420	7090	5910	6600	4250	903	891
7	920	997	5360	2570	4190	3340	7290	5490	6600	4250	866	1260
8	966	966	4600	2440	4830	3730	7050	5170	6410	4690	842	1650
9	951	920	3990	2700	4720	5200	6570	5090	6380	4800	782	1480
10	935	920	3630	2790	4360	5910	6160	5520	6070	5380	735	1460
11	905	905	3520	2990	3970	5700	6070	5850	5460	5030	735	1630
12	863	891	3710	2970	3600	5350	5820	5640	5110	4420	770	1490
13	835	891	7600	2990	3220	4890	5520	5580	4910	3970	891	1410
14	821	966	16600	3060	3060	4470	5320	6070	4910	3790	1120	1340
15	807	1250	15900	3200	2920	4060	5110	6730	4610	3790	1040	1280
16	793	1410	12300	3730	2720	3760	5090	6730	4220	3810	1260	1220
17	780	1310	9570	4190	2550	3710	5110	6250	3870	3450	1310	1220
18	767	1210	7520	4610	2420	4110	4860	5910	4030	3080	1190	1220
19	767	1080	6040	4360	2340	4660	4690	5640	4140	2810	1160	1200
20	753	982	4890	4030	2440	5200	4690	5610	4470	2530	1140	1190
21	753	750	4330	3810	2530	5520	4640	5850	4690	2340	1140	1180
22	740	900	3950	3790	2700	5850	4500	6470	4800	2120	1150	1150
23	740	1030	3680	3470	2810	6250	4390	6280	5200	2000	1200	1120
24	727	1180	3520	3060	3100	6320	4220	5880	5110	1960	1180	1100
25	753	1570	3420	2880	3890	6040	4190	5460	4910	1870	1140	1070
26	951	5200	3420	2770	4610	6100	4440	5090	4330	1800	1120	1040
27	951	4300	3240	2640	4800	6570	7960	4720	4060	1600	1100	1020
28	905	3710	3040	2490	4500	6990	11400	4580	4280	1500	1060	1000
29	920	3570	2880	2440	---	7330	10100	4750	4770	1400	1030	992
30	966	3630	2880	2340	---	7960	9200	4640	4940	1350	992	979
31	997	---	2660	2260	---	7960	---	4390	---	1300	966	---
TOTAL	27652	46712	195150	91540	92770	158100	192810	182150	150970	102770	32014	34903
MEAN	892	1557	6295	2953	3313	5100	6427	5876	5032	3315	1033	1163
MAX	1280	5200	16600	4610	4830	7960	11400	8450	6600	5380	1310	1650
MIN	727	750	2660	1670	2280	3240	4190	4390	3870	1300	735	806
AC-FT	54850	92650	387100	181600	184000	313600	382400	361300	299400	203800	63500	69230

CAL YR 1977 TOTAL 611144 MEAN 1674 MAX 16600 MIN 344 AC-FT 1212000
WTR YR 1978 TOTAL 1307541 MEAN 3582 MAX 16600 MIN 727 AC-FT 2594000

13353000 SNAKE RIVER BELOW ICE HARBOR DAM, WA

LOCATION.--Lat 46°14'53", long 118°52'43", in NE¼SW¼, sec.24, T.9 N., R.31 E., Walla Walla County, Hydrologic Unit 17060110, in powerhouse forebay pier P-1 on south side of Bay 1 at Ice Harbor Dam, 8.0 mi (12.9 km) northeast of Burbank, and at mile 9 7 (15.6 km).

DRAINAGE AREA.--108,500 mi^2 (281,000 km^2), approximately.

PERIOD OF RECORD.--October 1907 to March 1917 (gage heights only October 1907 to August 1909), March 1962 to current year. Published as "at Burbank" prior to 1911 and as "near Burbank" 1912-17. Chemical analyses October 1965 to September 1969, October 1971 to September 1972. For records collected at site 7.5 mi (12.1 km) downstream see station 13353200.

REVISED RECORDS.--WSP 1317: Drainage area.

GAGE.--Watt-hour meters on each turbine in Ice Harbor Dam powerhouse. Elevations are National Geodetic Vertical Datum of 1929. Oct. 2, 1907, to Mar. 31, 1917, nonrecording gage at site approximately 2 mi (3.2 km) downstream at datum 300 ft (91 m) higher. Mar. 23, 1962, to Sept. 30, 1968, water-stage recorder 1.0 mi (1.6 km) downstream National Geodetic Vertical Datum of 1929.

REMARKS.--Records computed from power output, flow over spillway, flow through fish ladder, and lockage records at Ice Harbor Dam. Diversions above station for irrigation of over 4,090,000 acres (16,600 km^2). Flow regulated by Lake Sacajawea and many storage reservoirs and powerplants upstream.

COOPERATION.--Records furnished by Corps of Engineers. Records not reviewed but four discharge measurements made by the Geological Survey to verify turbine and spillway ratings.

AVERAGE DISCHARGE.--23 years (water years 1910-16, 1963-78), 56,380 ft^3/s (1,597 m^3/s), 40,850,000 acre-ft/yr (50,400 hm^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 312,000 ft^3/s (8,840 m^3/s) June 19, 1974; no flow momentarily Aug. 27, 1965 (result of testing at Ice Harbor Dam).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1948, reached an elevation of 361.9 ft (110.31 m) at a site 0.7 mi (1.1 km) downstream from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 172,000 ft^3/s (4,870 m^3/s) June 7; maximum forebay elevation, 440.33 ft (134.213 m) May 3; minimum discharge, 100 ft^3/s (2.83 m^3/s) part of each day Dec. 22, 28, 31, Jan. 1; minimum forebay elevation, 436.70 ft (133.106 m) Dec. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25400	24100	42300	42600	43800	63300	94700	110000	92100	91900	28100	8200
2	25800	19300	47700	39600	38400	60800	124000	118000	82600	65800	33300	28400
3	29300	22800	53500	42100	31200	53500	110000	102000	83400	89600	28600	14100
4	30700	27800	55800	41200	34600	36400	99900	122000	93700	77300	29000	9100
5	30000	18700	53700	43000	40700	28900	86200	110000	114000	92400	19500	37900
6	20400	14200	38600	46000	49700	47600	79200	99300	119000	91000	13300	35900
7	19100	26400	46400	48200	57700	51800	73800	99300	143000	87500	34000	43300
8	16200	20800	48700	34500	52100	60500	64800	99700	143000	72900	20800	41200
9	15400	24800	51800	46100	63000	59900	76900	95500	148000	67800	29100	34200
10	24100	25100	39600	47900	57200	64700	68100	81700	143000	83200	24600	9100
11	21200	12900	36100	50200	67600	60800	67500	100000	118000	78400	17400	19900
12	20900	21500	49300	46500	60300	61100	66700	107000	114000	66600	14400	34700
13	23700	16700	48600	51600	57200	68900	65600	95800	112000	64500	13300	36900
14	22600	24700	62400	48900	55800	61800	68000	97600	113000	41400	31400	39400
15	19300	17200	78900	47300	55300	51400	59200	108000	115000	65700	26700	34300
16	10700	24800	79600	55200	59900	60900	60800	112000	113000	34200	25200	37300
17	33400	35400	78600	55900	45300	65700	69400	115000	110000	52300	22000	33200
18	24900	36900	62200	58100	42400	64000	61200	112000	97700	53900	30300	37000
19	19000	21600	54300	61600	44900	54600	77[illegible]00	99600	105000	49700	24600	47800
20	21100	28600	60600	55300	50500	44300	71500	94800	93500	43100	12500	33600
21	24200	43200	45200	54700	47200	68100	60400	91800	98700	37600	24700	39600
22	8200	45700	39500	51400	40300	84300	61300	98500	94200	34100	27600	44700
23	6300	36200	47500	51600	37900	80200	63000	110000	98200	14700	26900	26800
24	23600	14900	39000	49000	40600	79700	62100	101000	91300	42900	28600	18200
25	20700	27500	31500	49400	36000	63400	64100	103000	94000	29000	34300	39400
26	21900	19600	43400	39000	41500	78000	67500	96700	86500	38100	24700	30200
27	32800	34500	54800	55500	48800	73100	86400	86700	95400	30300	25800	39200
28	22100	38100	37400	40800	57900	80900	119000	79200	92800	35100	34700	42100
29	31000	41900	54600	34800	---	90900	111000	91700	89900	24800	37600	37300
30	28600	51300	56000	46600	---	91900	108000	85000	91700	19400	30500	20400
31	32000	---	41000	43800	---	91500	---	85900	---	34200	34800	---
TOTAL	704600	817200	1578600	1478400	1357800	2002900	2347700	3108800	3165700	1709400	808300	953400
MEAN	22730	27240	50920	47690	48490	64610	78260	100300	106200	55140	26070	31780
MAX	33400	51300	79600	61600	67600	91900	124000	122000	148000	92400	37600	47800
MIN	6300	12900	31500	34500	31200	28900	59200	79200	82600	14700	12500	8200
AC-FT	1398000	1621000	3131000	2932000	2693000	3973000	4657000	6166000	6319000	3391000	1603000	1891000

CAL YR 1977 TOTAL 10199900 MEAN 27940 MAX 79600 MIN 3300 AC-FT 20230000
WTR YR 1978 TOTAL 20052800 MEAN 54940 MAX 148000 MIN 6300 AC-FT 39770000

WALLA WALLA RIVER BASIN

14010000 SOUTH FORK WALLA WALLA RIVER NEAR MILTON, OR

LOCATION.--Lat 45°49'48", long 118°10'08", in NE¼NE¼ sec.15, T.4 N., R.37 E., Umatilla County, Hydrologic Unit 17070102, on right bank 1.0 mi (1.6 km) downstream from Elbow Creek, 13 mi (21 km) southeast of Milton, and at mile 59.1 (95.1 km).

DRAINAGE AREA.--63 mi^2 (163 km^2), approximately.

PERIOD OF RECORD.--February to October 1903, August 1906 to November 1917, May 1931 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as "12 mi (19 km) above Milton" 1903 and as "above Pacific Power & Light Co.'s intake near Milton" 1907-10.

REVISED RECORDS.--WSP 964: Drainage area. WSP 1398: 1912, 1940, drainage area at former site.

GAGE.--Water-stage recorder. Altitude of gage is 2,050 ft (625 m) from river-profile map. Prior to Mar. 23, 1934, water-stage recorder or nonrecording gage at several sites within 1.5 mi (2.4 km) of present site at various datums.

REMARKS.--Records good except those above 900 ft^3/s (25.5 m^3/s), which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--57 years (water years 1908-17, 1932-78), 178 ft^3/s (5.041 m^3/s), 38.37 in/yr (975 mm/yr), 129,000 acre-ft/yr (159 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,530 ft^3/s (71.6 m^3/s) Jan. 29, 1965, gage height, 5.60 ft (1.707 m); minimum, 72 ft^3/s (2.04 m^3/s) Feb. 14, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage about 6 ft (2 m) Mar. 31, 1931, present site and datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft^3/s (17.0 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 26	unknown	unknown		unknown	
Dec. 2	1500	*2,110	59.8	*4.93	1.503
Dec. 14	1930	726	20.6	2.56	0.780

Minimum, 98 ft^3/s (2.78 m^3/s) Aug. 3-11, 28, 29, Sept. 2-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	132	220	151	163	195	354	302	167	121	100	103
2	128	149	1070	145	160	185	302	280	167	124	100	100
3	124	139	756	150	174	180	271	267	167	133	100	100
4	121	131	456	160	191	170	259	251	167	133	100	98
5	120	132	342	220	223	165	247	239	167	130	100	100
6	120	131	302	203	291	160	239	231	167	121	100	106
7	127	129	267	203	291	157	235	223	163	118	100	121
8	125	125	243	223	275	177	227	227	157	124	100	121
9	122	123	227	251	259	211	219	239	157	115	100	121
10	120	121	223	251	235	215	219	255	154	112	98	118
11	117	122	223	231	215	211	223	247	148	115	100	112
12	117	123	223	219	199	199	211	231	142	115	103	109
13	117	131	480	215	184	191	207	243	139	115	103	109
14	115	145	660	227	174	181	203	251	136	112	103	109
15	115	168	624	243	167	174	203	267	133	112	109	106
16	115	158	468	259	157	170	211	247	130	112	106	106
17	115	150	396	271	154	177	199	235	124	115	106	112
18	112	145	330	271	154	195	191	227	124	112	103	112
19	112	140	280	251	157	207	195	231	127	112	103	109
20	112	130	251	227	163	215	195	235	124	109	103	109
21	112	125	239	207	170	223	191	235	124	109	106	106
22	112	120	231	195	177	239	188	231	121	109	115	106
23	112	170	223	184	184	247	184	215	124	109	109	106
24	112	300	211	174	195	231	184	207	127	109	103	103
25	117	500	199	170	199	223	203	195	139	109	103	103
26	117	600	191	174	207	243	219	184	127	109	103	106
27	112	350	184	163	207	263	319	184	121	109	100	106
28	115	280	181	163	203	271	390	184	118	106	100	106
29	122	250	181	163	---	302	360	177	121	103	100	106
30	129	235	177	160	---	313	330	174	121	103	103	106
31	128	---	163	160	---	302	---	167	---	103	103	---
TOTAL	3674	5654	10221	6284	5528	6592	7178	7081	4203	3538	3182	3235
MEAN	119	188	330	203	197	213	239	228	140	114	103	108
MAX	132	600	1070	271	291	313	390	302	167	133	115	121
MIN	112	120	163	145	154	157	184	167	118	103	98	98
CFSM	1.89	2.98	5.24	3.22	3.13	3.38	3.79	3.62	2.22	1.81	1.64	1.71
IN.	2.17	3.34	6.04	3.71	3.26	3.89	4.24	4.18	2.48	2.09	1.88	1.91
AC-FT	7290	11210	20270	12460	10960	13080	14240	14050	8340	7020	6310	6420

CAL YR 1977 TOTAL 61363 MEAN 168 MAX 1070 MIN 110 CFSM 2.67 IN 36.23 AC-FT 121700
WTR YR 1978 TOTAL 66370 MEAN 182 MAX 1070 MIN 98 CFSM 2.89 IN 39.19 AC-FT 131600

14010800 NORTH FORK WALLA WALLA RIVER NEAR MILTON-FREEWATER, OR

LOCATION.--Lat 45°53'06", long 118°11'06", in SE¼NW¼ sec.28, T.5 N., R.37 E., Umatilla County, Hydrologic Unit 17070102, on right bank 2.8 mi (4.5 km) downstream from Little Meadow Canyon, 8.9 mi (14.3 km) southeast of Milton-Freewater, and at mile 5.6 (9.0 km).

DRAINAGE AREA.--34.4 mi^2 (89.1 km^2).

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,940 ft (591 m), from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--9 years, 54.2 ft^3/s (1.535 m^3/s), 21.40 in/yr (544 mm/yr), 39,270 acre-ft/yr (48.4 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft^3/s (29.5 m^3/s) Jan. 25, 1975, gage height, 6.58 ft (2.006 m), from rating curve extended above 400 ft^3/s (11.3 m^3/s) on basis of discharge measurement at gage height 5.67 ft (1.728 m) and slope-area measurement at gage height 6.30 ft (1.920 m); minimum, 4.9 ft^3/s (0.14 m^3/s) Sept. 5, 12, 13, Oct. 17-19, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft^3/s (8.50 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 2	1630	*644	18.2	*5.92	1.804	Dec. 13	1930	300	8.50	4.96	1.512

Minimum, 6.1 ft^3/s (0.17 m^3/s) Aug. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	14	68	19	38	82	148	134	23	12	6.9	7.5
2	13	18	302	18	40	68	124	108	23	14	6.9	7.3
3	12	17	308	18	52	59	114	84	22	15	6.8	7.1
4	11	15	200	29	69	53	112	75	22	16	6.8	7.0
5	11	14	138	85	93	49	108	65	22	16	6.8	7.2
6	11	14	109	90	138	45	105	55	21	14	6.7	7.8
7	12	13	82	67	148	44	106	50	20	12	6.6	10
8	12	12	57	71	146	54	102	44	19	12	6.5	11
9	11	12	47	106	133	80	91	43	18	11	6.5	8.6
10	11	11	47	106	113	94	83	48	18	10	6.5	8.5
11	10	11	47	91	98	96	77	49	18	9.9	6.6	8.3
12	9.9	11	49	78	81	90	69	44	17	9.7	6.9	7.9
13	9.6	13	200	72	67	81	64	45	16	9.4	7.2	7.6
14	9.3	17	285	75	54	70	60	46	17	8.8	7.1	7.4
15	9.2	24	268	91	50	63	58	58	16	8.4	8.3	7.3
16	8.9	24	208	102	43	59	60	52	15	8.4	8.5	7.2
17	8.7	21	166	111	39	63	58	49	14	8.6	7.7	8.1
18	8.7	20	129	116	39	72	57	46	14	8.2	7.4	8.8
19	8.6	18	100	106	43	81	55	42	13	8.0	7.2	8.2
20	8.4	16	79	88	51	89	54	40	13	7.9	7.4	7.8
21	8.4	14	66	75	54	98	51	39	13	7.6	7.6	7.4
22	8.3	14	56	64	55	109	50	38	13	7.6	9.7	7.4
23	8.0	15	49	52	58	116	47	35	13	7.5	9.4	7.6
24	8.0	16	40	44	66	109	44	34	13	7.4	8.0	7.4
25	8.6	72	34	42	75	104	44	32	19	7.3	7.4	7.4
26	9.0	148	31	49	86	108	49	29	15	7.3	7.6	7.4
27	8.7	112	29	48	94	116	152	28	13	7.3	7.3	7.2
28	8.7	93	26	45	92	119	266	27	12	7.2	7.2	7.2
29	9.5	87	26	45	---	123	220	26	12	7.1	7.1	7.2
30	11	72	25	42	---	122	175	25	13	7.0	7.4	7.2
31	11	---	23	40	---	114	---	24	---	7.0	7.7	---
TOTAL	308.5	958	3294	2085	2115	2630	2803	1514	497	299.6	227.7	234.0
MEAN	9.95	31.9	106	67.3	75.5	84.8	93.4	48.8	16.6	9.66	7.35	7.80
MAX	14	148	308	116	148	123	266	134	23	16	9.7	11
MIN	8.0	11	23	18	38	44	44	24	12	7.0	6.5	7.0
CFSM	.29	.93	3.08	1.96	2.20	2.47	2.72	1.42	.48	.28	.21	.23
IN.	.33	1.04	3.56	2.25	2.29	2.84	3.03	1.64	.54	.32	.25	.25
AC-FT	612	1900	6530	4140	4200	5220	5560	3000	986	594	452	464

CAL YR 1977 TOTAL 11594.8 MEAN 31.8 MAX 308 MIN 6.4 CFSM .92 IN 12.54 AC-FT 23000
WTR YR 1978 TOTAL 16965.8 MEAN 46.5 MAX 308 MIN 6.5 CFSM 1.35 IN 18.35 AC-FT 33650

14019200 COLUMBIA RIVER AT MCNARY DAM, NEAR UMATILLA, OR

LOCATION.--Lat 45°56'05", long 119°17'45", in NE¼ sec.10, T.5 N., R.28 E., Umatilla County, Hydrologic Unit 17070101, in powerhouse forebay between generator units 2 and 3 at McNary Dam, 2.5 mi (4.0 km) northeast of Umatilla, 3.0 mi (4.8 km) upstream from Umatilla River, and at mile 292.0 (469.8 km).

DRAINAGE AREA.--214,000 mi^2 (554,300 km^2), approximately.

PERIOD OF RECORD.--October 1950 to current year. Gage-height records collected at site at Umatilla since 1876 are contained in reports of U.S. Weather Bureau. Prior to October 1966, published as "below McNary Dam."

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1966, at site 1.2 mi (1.9 km) downstream (tailwater) at 240.04 ft (73.164 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records computed from power output and flow over spillway at McNary Dam. Considerable regulation by many reservoirs upstream. Diurnal fluctuation caused by powerplant and gates at McNary Dam since beginning of operation in April 1953. Many diversions for irrigation above station.

COOPERATION.--Daily discharge records furnished by Corps of Engineers. Two discharge measurements made and records reviewed by Geological Survey.

AVERAGE DISCHARGE.--28 years, 184,800 ft^3/s (5,234 m^3/s), 133,900,000 acre-ft/yr (165 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 818,000 ft^3/s (23,200 m^3/s) June 2, 1956, elevation, 277.01 ft (84.433 m), at site 1.2 mi (1.9 km) downstream; maximum daily discharge, 798,000 ft^3/s (22,600 m^3/s) June 2, 1956; minimum daily discharge, 39,500 ft^3/s (1,120 m^3/s) July 10, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 5, 1894, reached an elevation of 284.2 ft (86.62 m), and that of May 31, 1948, reached an elevation of about 280 ft (85.3 m), both at site 1.2 mi (1.9 km) downstream from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 317,000 ft^3/s (8,980 m^3/s) June 8; maximum forebay elevation, 339.9 ft (103.60 m) June 16, 17; minimum daily discharge, 60,900 ft^3/s (1,720 m^3/s) Oct. 16; minimum forebay elevation, 337.2 ft (102.78 m) Sept. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87000	99600	156000	125000	189000	181000	235000	233000	223000	230000	158000	106000
2	86300	104000	131000	118000	184000	180000	265000	275000	218000	187000	151000	103000
3	95700	120000	142000	152000	173000	193000	251000	253000	220000	174000	124000	98900
4	115000	133000	138000	156000	130000	149000	249000	278000	214000	172000	116000	82200
5	106000	84300	151000	140000	147000	141000	232000	275000	199000	220000	109000	118000
6	104000	74900	149000	159000	142000	162000	244000	277000	245000	190000	108000	166000
7	90300	108000	155000	149000	165000	171000	231000	242000	290000	230000	120000	194000
8	81300	121000	166000	128000	158000	155000	222000	228000	317000	190000	138000	187000
9	81100	113000	155000	134000	169000	150000	221000	253000	304000	209000	146000	173000
10	103000	102000	126000	157000	169000	162000	233000	251000	310000	212000	143000	152000
11	87100	84700	106000	184000	165000	155000	197000	266000	272000	215000	130000	189000
12	97800	95900	162000	186000	144000	123000	207000	276000	291000	222000	129000	140000
13	104000	72900	137000	165000	158000	150000	220000	255000	262000	217000	68800	163000
14	80600	104000	160000	148000	178000	164000	255000	241000	269000	204000	154000	176000
15	84000	105000	179000	144000	179000	163000	256000	259000	265000	190000	132000	170000
16	60900	131000	190000	166000	186000	153000	233000	278000	252000	211000	138000	144000
17	101000	144000	214000	165000	177000	170000	226000	270000	239000	189000	130000	137000
18	117000	143000	164000	182000	150000	145000	226000	288000	244000	189000	134000	158000
19	97900	134000	157000	183000	133000	127000	222000	270000	232000	159000	113000	163000
20	99900	130000	161000	130000	147000	140000	220000	224000	217000	192000	76200	149000
21	106000	162000	156000	173000	178000	164000	220000	230000	237000	180000	128000	152000
22	75800	165000	149000	141000	159000	188000	202000	267000	213000	187000	132000	136000
23	70000	151000	150000	170000	173000	204000	219000	283000	226000	153000	126000	126000
24	81200	107000	123000	173000	172000	195000	191000	294000	179000	183000	115000	97300
25	81500	86300	81900	169000	165000	200000	224000	307000	209000	179000	122000	126000
26	97000	92900	102000	167000	142000	178000	213000	275000	209000	166000	105000	135000
27	117000	104000	139000	196000	160000	198000	223000	264000	215000	118000	106000	133000
28	117000	123000	161000	182000	176000	210000	241000	240000	237000	142000	125000	147000
29	84800	130000	149000	130000	---	220000	268000	236000	212000	136000	138000	139000
30	76900	148000	142000	172000	---	221000	262000	252000	211000	133000	130000	126000
31	101000	---	136000	176000	---	231000	---	228000	---	155000	135000	---
TOTAL	2888100	3478500	4587900	4922000	4568000	5343000	6908000	8068000	7231000	5734000	3880000	4286400
MEAN	93160	116000	148000	158800	163100	172400	230300	260300	241000	185000	125200	142900
MAX	117000	165000	214000	196000	189000	231000	268000	307000	317000	230000	158000	194000
MIN	60900	72900	81900	118000	130000	123000	191000	224000	179000	118000	68800	82200
AC-FT	5729000	6900000	9100000	9763000	9061000	10600000	13700000	16000000	14340000	11370000	7696000	8502000

CAL YR 1977 TOTAL 42427500 MEAN 116200 MAX 214000 MIN 39500 AC-FT 84150000
WTR YR 1978 TOTAL 61894900 MEAN 169600 MAX 317000 MIN 60900 AC-FT 122800000

14019250 COLUMBIA RIVER AT UMATILLA, OR

LOCATION.--Lat 45°55'53", long 119°19'39", in SW¼NW¼ sec.9, T.5 N., R.28 E., Umatilla County, Hydrologic Unit 17070101, near center span on upstream side of bridge at Umatilla, and at mile 290.5 (467.4 km).

DRAINAGE AREA.--214,000 mi^2 (554,300 km^2), approximately.

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 22.5°C Aug. 17, 1977; minimum, 1.0°C Feb. 7, 1976.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 22.0°C Aug. 7, 8; minimum, 2.0°C Jan. 3-5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CHLORO-PHYLL A PHYTO-PLANK-TON, UNCORR. (UG/L)	CHLORO-PHYLL B PHYTO-PLANK-TON, UNCORR. (UG/L)
OCT 05...	0900	106000	16.3	7.6	9.5	203	--	--	1.04	.645
NOV 11...	1000	89700	11.2	7.9	10.5	219	K9	K240	3.38	.793
DEC 07...	0900	155000	7.9	7.8	11.9	214	850	210	1.40	.000
JAN 13...	0830	164000	3.7	7.6	12.6	178	390	130	.212	.094
FEB 01...	0900	189000	3.9	7.8	12.8	193	K8	68	.732	.000
23...	0900	173000	3.5	8.0	13.5	189	K3	25	--	--
MAR 15...	0800	163000	5.4	7.9	12.3	198	96	31	3.61	.051
APR 13...	0800	220000	8.7	7.8	11.7	162	K2	K8	3.40	1.36
MAY 10...	0900	251000	12.0	7.6	12.7	151	K2	35	4.67	.000
JUN 15...	1000	265000	14.6	8.4	11.7	97	K3	<0	.000	.000
JUL 07...	0900	230000	16.9	7.7	8.6	112	--	--	12.2	.659
AUG 17...	0800	130000	19.3	8.4	9.3	137	K3	K9	--	--
SEP 27...	0930	133000	17.6	7.9	9.7	150	K15	<0	--	--

DATE	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
OCT 05...	3	7.3	.16	.00	.12	.12	.28	.03	1.5	101
NOV 11...	13	7.8	.22	.01	.18	.19	.41	.04	1.8	105
DEC 07...	0	12	.36	--	--	.20	.56	.06	1.9	128
JAN 13...	10	11	.22	.06	.23	.29	.51	.06	--	99
FEB 01...	8	11	.42	.01	.13	.14	.56	.05	--	110
23...	14	13	.40	.00	.15	.15	.55	.07	1.5	107
MAR 15...	9	13	.53	.03	.17	.20	.73	.11	2.2	114
APR 13...	2	10	.28	.03	.26	.29	.57	.05	2.2	97
MAY 10...	10	12	.09	.00	.51	.51	.60	.07	2.9	88
JUN 15...	5	8.3	.02	.01	.30	.31	.33	.01	3.3	60
JUL 07...	2	8.3	.04	.00	.23	.23	.27	.01	2.3	65
AUG 17...	1	5.6	.01	.05	.31	.36	.37	.02	2.5	73
SEP 27...	12	7.0	.12	.07	.43	.50	.62	.04	1.7	96

14019250 COLUMBIA RIVER AT UMATILLA, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBFR 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SELE-NIUM, TOTAL (UG/L AS SE)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)
OCT										
05...	2	2	<10	5	<10	160	<100	20	0	.0
NOV										
11...	2	1	8	4	11	110	44	50	0	.6
DEC										
07...	17	2	1	0	11	690	24	90	0	.0
JAN										
13...	12	2	3	20	10	320	16	40	0	.0
FEB										
01...	13	2	--	0	34	300	14	70	0	.1
23...	20	2	3	10	14	630	21	60	0	.0
MAR										
15...	11	2	1	10	19	380	3	50	0	.0
APR										
13...	13	3	1	0	20	450	12	60	0	.0
MAY										
10...	22	1	--	0	50	770	--	60	0	.1
JUN										
15...	21	2	1	15	13	430	6	30	0	.1
JUL										
07...	44	1	1	0	14	350	11	20	0	.0
AUG										
17...	6	--	3	0	15	280	24	30	--	--
SEP										
27...	10	1	2	0	20	180	13	10	0	.0

DATE	TIME	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA)	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	OIL AND GREASE (MG/L)
OCT									
05...	0900	18	5.4	7.9	1.4	67	17	4.3	0
NOV									
11...	1000	18	5.7	8.0	1.7	71	16	4.7	0
FEB									
01...	0900	20	6.4	7.7	1.5	71	17	4.5	--
APR									
13...	0800	19	5.2	5.6	1.3	63	13	3.1	0
JUL									
07...	0900	12	3.4	4.7	.9	40	9.2	2.5	0

TEMPERATURE (DEG. C) OF WATER, WATEH YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOHER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---			---	---	3.5	3.5	4.0	3.5	4.0	4.0
2	---	---			---	---	3.5	3.0	3.5	3.5	4.0	4.0
3	16.0	16.0			---	---	3.5	3.0	3.5	3.5	4.0	4.0
4	16.0	16.0			---	---	3.0	2.0	3.5	3.0	4.0	4.0
5	16.0	16.0			---	---	2.0	2.0	3.5	3.0	4.0	3.5
6	16.0	15.5			---	---	2.5	2.0	3.5	3.5	3.5	3.5
7	15.5	15.5			---	---	3.0	2.5	3.5	3.5	3.5	3.5
8	15.5	15.5			---	---	3.0	3.0	3.5	3.5	3.5	3.5
9	15.5	15.0			7.0	6.5	3.5	3.0	4.0	3.5	4.0	3.5
10	15.0	15.0			7.0	6.5	3.5	3.0	4.0	4.0	4.5	4.0
11	15.0	15.0			6.5	6.5	3.0	3.0	4.0	4.0	4.5	4.0
12	15.0	14.5			6.5	6.5	3.5	3.0	4.0	4.0	5.0	4.5
13	15.0	15.0			6.5	6.0	3.5	3.5	4.0	3.5	5.0	5.0
14	15.0	15.0			6.5	6.0	3.5	3.5	3.5	3.5	5.0	5.0
15	15.0	15.0			7.0	6.5	4.0	3.5	3.5	3.5	5.5	5.0
16	15.0	15.0			7.5	7.0	4.0	3.5	3.5	3.5	5.5	5.5
17	15.0	15.0			7.0	6.5	4.0	3.5	3.5	3.5	5.5	5.5
18	15.5	15.0			6.5	6.0	4.0	4.0	3.5	3.5	5.5	5.5
19	15.5	15.0			6.0	6.0	4.5	4.0	3.5	3.5	6.0	5.5
20	15.0	15.0			6.0	5.5	4.5	4.0	3.5	3.5	6.5	6.0
21	15.0	15.0			5.5	5.0	4.5	4.0	3.5	3.5	6.5	6.0
22	15.0	15.0			5.0	5.0	4.5	4.0	3.5	3.5	7.0	6.5
23	15.0	14.5			5.0	5.0	4.5	4.5	4.0	3.5	7.0	7.0
24	15.0	14.5			5.0	5.0	4.5	4.0	4.0	3.5	7.0	7.0
25	14.5	14.5			5.0	5.0	4.5	4.0	4.0	3.5	7.0	7.0
26	14.5	14.5			5.0	4.5	4.5	4.0	4.0	3.5	7.0	7.0
27	14.5	14.0			4.5	4.5	4.0	4.0	4.0	3.5	7.5	7.0
28	14.0	14.0			4.5	4.0	4.0	4.0	4.0	3.5	7.5	7.0
29	14.0	14.0			4.0	3.0	4.0	4.0	---	---	8.0	7.5
30	---	---			3.5	3.5	4.0	4.0	---	---	8.0	8.0
31	---	---			3.5	3.5	4.0	4.0	---	---	8.0	8.0
MONTH	16.0	14.0			7.5	3.0	4.5	2.0	4.0	3.0	8.0	3.5

14019250 COLUMBIA RIVER AT UMATILLA, OR—Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	8.0	10.5	10.5	13.5	13.0	17.5	17.0	20.5	20.0	20.0	19.5
2	8.0	8.0	11.0	10.5	13.5	13.0	17.0	17.0	20.5	20.0	20.0	20.0
3	8.0	8.0	11.0	11.0	13.5	13.0	17.0	17.0	---	---	20.0	19.5
4	8.0	8.0	11.0	11.0	14.0	13.5	17.0	17.0	20.5	20.0	19.5	19.5
5	8.0	8.0	11.0	11.0	14.0	13.5	17.0	17.0	20.5	20.5	19.5	19.5
6	8.0	8.0	11.0	11.0	14.5	14.0	17.0	17.0	21.0	20.5	19.5	19.5
7	9.5	8.0	11.0	11.0	15.0	14.5	17.5	17.0	22.0	21.0	19.5	19.5
8	8.0	7.5	11.5	11.0	15.0	15.0	17.5	17.5	22.0	21.0	19.5	19.0
9	8.0	7.5	11.5	11.0	15.0	15.0	18.0	17.5	21.5	21.5	19.0	18.5
10	8.0	7.5	12.0	11.5	15.0	14.5	18.0	18.0	21.5	21.5	18.5	18.5
11	8.5	8.0	12.0	11.5	15.0	14.5	18.0	18.0	21.5	20.0	18.5	18.0
12	8.5	8.5	11.5	11.5	15.0	15.0	18.0	18.0	21.0	21.0	18.0	18.0
13	8.5	8.5	11.5	11.5	15.0	15.0	18.0	18.0	21.0	21.0	18.0	18.0
14	8.5	8.5	11.5	11.5	15.0	14.5	18.5	18.0	20.5	20.5	18.0	18.0
15	8.5	8.5	11.5	11.5	14.5	14.5	18.0	18.0	20.5	20.5	18.0	18.0
16	8.5	8.0	11.5	11.5	14.5	14.5	18.0	18.0	19.5	19.5	18.0	18.0
17	8.5	8.0	11.5	11.5	14.5	14.5	18.0	17.5	19.5	19.0	18.0	18.0
18	8.5	8.0	12.0	11.5	14.5	14.5	17.5	17.5	19.5	19.0	18.0	17.5
19	8.5	8.0	12.5	12.0	15.0	14.5	18.0	17.5	19.0	19.0	17.5	17.5
20	9.0	8.5	12.5	12.5	15.0	15.0	18.5	18.0	19.0	19.0	17.5	17.5
21	9.0	8.5	13.0	12.5	15.0	15.0	18.5	18.5	19.0	19.0	17.0	17.0
22	9.0	8.5	13.0	13.0	15.0	15.0	19.0	18.5	19.0	19.0	17.5	17.0
23	8.5	8.5	13.0	12.5	15.5	15.0	19.0	19.0	19.0	18.5	17.5	17.0
24	9.0	8.5	13.0	12.5	15.5	15.0	19.5	19.0	19.0	19.0	17.5	17.5
25	9.0	8.5	13.0	12.5	15.5	15.5	19.5	19.5	19.0	19.0	17.5	17.5
26	9.5	9.0	13.0	12.5	15.5	15.5	19.5	19.5	19.5	19.0	17.5	17.5
27	9.5	9.5	12.5	12.5	16.0	15.5	20.0	19.5	19.5	19.0	17.5	17.5
28	9.5	9.5	12.5	12.5	16.5	16.0	20.0	19.5	19.5	19.5	18.0	17.5
29	10.0	9.5	13.0	12.5	17.0	16.0	20.0	19.5	20.0	19.5	18.0	18.0
30	10.5	10.0	13.0	12.5	17.0	16.5	20.0	20.0	19.5	19.5	18.0	17.5
31	---	---	13.0	13.0	---	---	20.5	20.0	20.0	19.5	---	---
MONTH	10.5	7.5	13.0	10.5	17.0	13.0	20.5	17.0	22.0	18.5	20.0	17.0

14020000 UMATILLA RIVER ABOVE MEACHAM CREEK, NEAR GIBBON, OR

LOCATION.--Lat 45°43'11", long 118°19'20", in SE¼SW¼ sec.21, T.3 N., R.36 E., Umatilla County, Hydrologic Unit 17070103, Umatilla Indian Reservation, on right bank 0.8 mi (1.3 km) downstream from Ryan Creek, 2.2 mi (3.5 km) upstream from Meacham Creek, 2.5 mi (4.0 km) northeast of Gibbon, and at mile 83.1 (133.7 km).

DRAINAGE AREA.--131 mi^2 (339 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1933 to current year.

REVISED RECORDS.--WSP 1935: 1946-48(M), 1950(M), 1953(M), 1956-59(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,854.81 ft (565.346 m) National Geodetic Vertical Datum of 1929. Prior to June 27, 1939, at site 1 mi (2 km) downstream at datum 43.94 ft (13.393 m) lower.

REMARKS.--Water-discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--45 years, 227 ft^3/s (6.429 m^3/s), 23.53 in/yr (598 mm/yr), 164,500 acre-ft/yr (203 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,930 ft^3/s (168 m^3/s) Jan. 25, 1975, gage height, 9.18 ft (2.798 m), from rating curve extended above 3,500 ft^3/s (99.1 m^3/s); maximum gage height, 9.50 ft (2.896 m) Jan. 29, 1965; minimum discharge, 16 ft^3/s (0.45 m^3/s) Nov. 9, 1965, momentary regulation from unknown source.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft^3/s (39.6 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 2	1815	*2,730	77.3	*6.58	2.006
Dec. 13	1845	2,450	69.4	6.22	1.896
Apr. 28	0700	1,430	40.5	5.22	1.591

Minimum, 45 ft^3/s (1.27 m^3/s) Sept. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	70	341	168	206	353	650	560	148	78	49	51
2	101	84	1430	150	209	309	566	480	145	82	49	51
3	88	88	1370	180	257	275	485	406	140	82	48	49
4	78	84	824	222	289	257	445	361	138	86	48	48
5	72	82	578	305	353	236	420	321	133	84	48	51
6	67	79	475	349	550	222	415	293	130	78	48	57
7	73	75	401	301	572	222	430	275	120	73	48	70
8	73	72	341	345	530	285	425	264	113	79	47	73
9	70	69	297	450	465	515	397	264	108	73	47	58
10	67	67	282	455	397	566	374	285	115	70	47	61
11	64	65	278	388	349	495	370	278	110	69	47	58
12	62	63	278	357	305	425	337	257	101	67	48	55
13	59	71	1310	357	271	379	317	275	97	64	51	52
14	58	77	1910	401	243	333	301	285	96	63	49	52
15	57	134	1650	525	229	297	289	317	90	61	55	51
16	55	172	1140	596	209	275	317	337	86	61	57	49
17	54	149	845	638	194	275	297	321	82	60	55	55
18	54	133	656	644	191	301	301	305	81	58	52	57
19	53	118	525	530	203	353	309	289	78	57	51	55
20	52	105	430	420	229	397	317	282	76	56	52	52
21	50	96	388	365	247	415	297	278	75	56	53	51
22	49	99	353	333	268	455	285	268	73	55	61	51
23	49	93	325	301	271	490	271	236	76	53	61	49
24	48	118	293	271	305	435	261	219	75	55	55	49
25	54	760	264	257	361	397	275	203	86	53	53	48
26	55	1010	243	250	415	450	297	185	76	52	52	47
27	52	571	229	229	435	505	716	180	73	51	51	47
28	53	470	219	222	401	525	1270	183	73	49	51	47
29	57	414	212	219	---	550	915	170	76	48	49	46
30	60	360	209	209	---	566	698	163	81	48	51	46
31	67	---	188	209	---	530	---	153	---	49	53	---
TOTAL	1975	5848	18284	10646	8954	12088	13047	8693	2951	1970	1586	1586
MEAN	63.7	195	590	343	320	390	435	280	98.4	63.5	51.2	52.9
MAX	124	1010	1910	644	572	566	1270	560	148	86	61	73
MIN	48	63	188	150	191	222	261	153	73	48	47	46
CFSM	.49	1.49	4.50	2.62	2.44	2.98	3.32	2.14	.75	.49	.39	.40
IN.	.56	1.66	5.19	3.02	2.54	3.43	3.70	2.47	.84	.56	.45	.45
AC-FT	3920	11600	36270	21120	17760	23980	25880	17240	5850	3910	3150	3150

CAL YR 1977 TOTAL 62495 MEAN 171 MAX 1910 MIN 38 CFSM 1.31 IN 17.75 AC-FT 124000
WTR YR 1978 TOTAL 87628 MEAN 240 MAX 1910 MIN 46 CFSM 1.83 IN 24.88 AC-FT 173800

14020000 UMATILLA RIVER ABOVE MEACHAM CREEK, NEAR GIBBON, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: June 1959 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 25.0°C July 13, 15, 21, 1961; minimum, 0.0°C on several days during winter period in 1960, 1962-64, 1968, 1969, 1973.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 18.5°C Sept. 3; minimum, 2.0°C Jan. 3, 4.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.0	10.0	9.0	9.0	6.0	5.5	3.0	3.0	4.5	4.5	5.0	5.0
2	12.0	9.5	9.0	7.0	6.0	6.0	3.0	3.0	5.0	4.5	5.0	4.5
3	11.0	9.0	7.0	6.5	6.5	6.0	3.0	2.0	5.0	5.0	4.5	4.5
4	11.0	8.5	7.0	6.5	6.5	5.5	3.5	2.0	5.5	5.0	4.5	4.5
5	10.5	8.5	8.0	7.0	5.5	5.5	4.0	3.5	5.5	5.5	5.0	4.5
6	10.5	9.0	8.5	8.0	6.0	5.5	4.0	4.0	5.5	5.0	6.0	5.0
7	10.5	10.0	8.0	7.0	6.0	5.0	4.5	4.0	5.5	5.0	6.0	6.0
8	11.5	9.5	7.0	6.5	5.0	5.0	4.5	4.5	5.0	5.0	6.0	6.0
9	11.0	10.5	7.0	6.5	5.0	5.0	4.5	4.5	5.0	5.0	6.5	6.0
10	10.5	9.0	7.0	6.5	5.5	5.0	4.5	4.5	5.0	4.5	6.0	5.5
11	10.5	8.0	7.0	7.0	5.5	5.5	4.5	4.5	4.5	4.5	6.0	5.5
12	11.0	8.5	7.0	6.5	5.5	5.5	5.0	4.5	4.5	4.0	6.0	5.5
13	11.0	9.5	8.0	7.0	5.5	5.5	5.0	4.5	4.5	4.5	5.5	5.5
14	11.0	9.0	8.0	7.0	6.0	5.5	5.5	4.5	5.0	4.5	6.0	5.5
15	11.0	9.0	8.0	8.0	6.0	5.5	5.5	5.0	5.0	4.5	6.5	5.0
16	11.0	9.5	8.0	6.5	5.5	5.5	5.0	5.0	5.0	4.5	8.0	5.5
17	10.5	8.5	6.5	5.5	5.5	5.0	5.0	5.0	5.0	4.5	9.0	6.0
18	10.5	9.0	5.5	5.5	5.5	5.5	5.0	5.0	4.5	4.5	8.5	6.0
19	10.5	9.5	5.5	5.0	5.5	4.5	5.0	5.0	6.0	4.5	8.5	6.5
20	10.0	8.5	5.0	3.5	4.5	4.0	5.0	5.0	5.5	5.0	8.5	6.0
21	10.0	8.5	3.5	3.5	4.5	4.0	5.0	5.0	6.0	5.0	8.5	6.0
22	9.5	8.5	3.5	3.0	4.5	4.5	5.0	4.5	5.5	5.0	9.0	6.5
23	10.5	9.0	4.5	3.0	4.5	3.5	4.5	4.0	6.0	5.0	7.0	6.5
24	11.0	9.5	5.0	4.5	4.0	3.5	4.5	4.0	5.5	5.5	7.0	6.0
25	11.0	10.5	5.5	5.0	4.0	4.0	4.5	4.0	5.5	5.5	8.0	6.5
26	10.5	9.0	5.5	5.5	4.0	4.0	5.0	4.5	5.5	5.5	9.5	6.5
27	9.0	8.0	5.5	5.5	4.0	3.5	4.5	4.5	5.5	5.5	9.0	6.5
28	9.5	8.5	6.0	5.5	3.5	3.0	4.5	4.5	5.5	5.0	8.5	6.5
29	10.0	9.5	6.5	6.0	3.5	3.0	4.5	4.5	---	---	8.5	6.0
30	10.0	9.0	6.0	5.5	3.5	3.0	4.5	4.5	---	---	7.0	6.5
31	9.0	9.0	---	---	3.5	3.0	4.5	4.0	---	---	9.0	6.0
MONTH	12.0	8.0	9.0	3.0	6.5	3.0	5.5	2.0	6.0	4.0	9.5	4.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	6.0	10.5	8.5	16.5	10.0			---	---	18.0	13.0
2	6.0	5.5	10.0	8.5	17.0	10.5			---	---	18.0	13.5
3	7.0	5.5	9.0	8.5	---	---			---	---	18.5	13.5
4	6.5	5.5	8.5	8.0	---	---			---	---	17.0	13.5
5	6.5	5.5	8.5	8.0	---	---			---	---	15.5	13.5
6	6.0	6.0	11.0	8.0	---	---			---	---	14.5	13.5
7	6.0	5.5	13.5	8.0	---	---			---	---	14.5	12.0
8	8.0	5.5	13.5	8.5	---	---			---	---	15.5	11.5
9	9.0	5.5	10.0	9.5	---	---			---	---	14.0	12.0
10	9.5	6.0	11.5	9.5	---	---			---	---	14.5	12.0
11	8.5	6.0	10.5	9.0	---	---			---	---	14.0	12.0
12	9.0	5.5	11.5	9.0	---	---			---	---	14.5	11.5
13	8.5	5.0	10.5	9.5	---	---			---	---	13.5	11.0
14	8.0	6.5	10.0	9.5	---	---			---	---	14.5	11.5
15	9.0	6.5	9.5	9.0	---	---			---	---	13.0	11.5
16	7.0	5.5	9.5	8.5	---	---			---	---	13.5	11.0
17	9.0	5.5	10.5	8.5	---	---			---	---	11.5	10.5
18	9.5	6.0	12.0	8.5	---	---			---	---	11.0	10.5
19	10.0	7.0	14.5	9.5	---	---			---	---	13.0	10.0
20	8.5	7.0	13.5	9.5	---	---			---	---	12.0	9.5
21	9.0	6.5	14.5	10.5	---	---			---	---	11.5	10.0
22	8.0	6.5	12.0	9.0	---	---			---	---	13.0	10.5
23	10.0	6.5	9.0	8.0	---	---			---	---	14.0	10.5
24	11.0	8.0	10.5	8.5	---	---			---	---	13.5	10.5
25	10.0	9.0	12.0	8.5	---	---			---	---	14.0	10.5
26	9.5	9.0	11.0	8.5	---	---			---	---	14.0	11.0
27	9.0	8.5	13.0	9.5	---	---			---	---	13.5	11.5
28	8.0	8.5	13.0	10.0	---	---			---	---	13.0	10.5
29	10.0	8.0	13.5	9.5	---	---			---	---	12.0	9.5
30	10.0	7.0	14.5	9.5	---	---			---	---	11.5	10.5
31	---	---	15.0	9.0	---	---			15.0	14.0	---	---
MONTH	11.0	5.0	15.0	8.0	17.0	10.0			15.0	14.0	18.5	9.5

14020300 MEACHAM CREEK AT GIBBON, OR

LOCATION.--Lat 45°41'20", long 118°21'20", in SE¼SE¼ sec.31, T.3 N., R.36 E., Umatilla County, Hydrologic Unit 17070103, on left bank 250 ft (76 m) downstream from Union Pacific railroad bridge, 0.9 mi (1.4 km) southeast of Gibbon, and at mile 1.4 (2.3 km).

DRAINAGE AREA.--176 mi^2 (456 km^2).

PERIOD OF RECORD.--August 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,803.05 ft (549.570 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent except those for period no no gage-height record, which are fair. No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,770 ft^3/s (107 m^3/s) Dec. 14, 1977, gage height, 6.37 ft (1.942 m), from floodmark; minimum, 7.1 ft^3/s (0.20 m^3/s) Aug. 11-14, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1975, reached a stage of 7.21 ft (2.198 m), from floodmark, discharge, about 8,200 ft^3/s (230 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft^3/s (45.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 2	unknown	1,730	49.0	unknown	
Dec. 14	unknown	*3,770	107	*6.37a	1.942

Minimum, 12 ft^3/s (0.34 m^3/s) Aug. 8-11.

a From floodmark.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	21	285	95	175	511	511	582	79	36	16	15
2	27	22	1730	100	175	419	471	475	77	41	16	15
3	27	23	1500	121	203	349	408	394	72	44	16	15
4	27	24	920	139	226	298	371	329	68	43	15	14
5	26	26	620	220	248	267	358	279	65	42	15	15
6	26	27	480	245	519	247	361	233	62	39	14	16
7	26	29	390	218	606	252	387	203	57	36	14	19
8	26	29	330	235	640	390	397	186	55	56	14	19
9	24	30	280	320	596	873	377	178	53	53	13	16
10	23	31	260	364	503	980	349	194	55	45	13	17
11	23	32	255	338	426	789	329	186	56	40	13	18
12	22	33	260	304	340	651	290	163	51	37	14	19
13	22	34	1400	320	287	549	256	175	49	33	14	18
14	21	35	2100	352	240	471	233	192	47	31	14	17
15	21	36	1610	511	215	401	218	211	44	28	16	17
16	19	37	1050	640	190	355	245	231	43	28	16	17
17	19	36	750	635	171	346	233	220	38	27	15	18
18	19	35	582	645	160	419	245	207	35	25	15	19
19	19	36	456	577	161	487	293	190	33	24	15	17
20	19	38	355	479	182	540	323	180	32	23	16	17
21	18	40	298	415	215	532	312	173	30	22	16	17
22	18	42	259	368	277	540	295	169	29	21	17	17
23	17	45	233	315	335	559	279	147	29	21	17	17
24	17	140	203	267	394	503	256	132	29	20	16	17
25	19	225	176	240	540	444	252	122	30	22	16	16
26	19	686	161	229	625	448	272	110	28	19	16	16
27	18	482	151	207	640	475	559	103	26	19	16	16
28	18	448	140	198	591	475	1140	103	25	18	16	16
29	19	394	140	192	---	475	946	96	26	17	16	15
30	19	353	137	184	---	471	730	93	36	17	16	15
31	20	---	124	182	---	419	---	84	---	17	16	---
TOTAL	665	3469	17635	9655	9930	14935	11696	6340	1359	944	472	500
MEAN	21.5	116	569	311	355	482	390	205	45.3	30.5	15.2	16.7
MAX	27	686	2100	645	640	980	1140	582	79	56	17	19
MIN	17	21	124	95	160	247	218	84	25	17	13	14
CFSM	.12	.66	3.23	1.77	2.02	2.74	2.22	1.17	.26	.17	.09	.10
IN.	.14	.73	3.73	2.04	2.10	3.16	2.47	1.34	.29	.20	.10	.11
AC-FT	1320	6880	34980	19150	19700	29620	23200	12580	2700	1870	936	992

CAL YR 1977 TOTAL 44441.3 MEAN 122 MAX 2100 MIN 7.5 CFSM .69 IN 9.39 AC-FT 88150
WTR YR 1978 TOTAL 77600.0 MEAN 213 MAX 2100 MIN 13 CFSM 1.21 IN 16.40 AC-FT 153900

NOTE.--No gage-height record Dec. 2-14.

14021000 UMATILLA RIVER AT PENDLETON, OR

LOCATION.--Lat 45°40'20", long 118°47'30", in NW¼NE¼ sec.10, T.2 N., R.32 E., Umatilla County, Hydrologic Unit 17070103, on wingwall 0.3 mi (0.5 km) downstream from Main Street bridge at Pendleton, 1.5 mi (2.4 km) downstream from Wildhorse Creek, 2.8 mi (4.5 km) upstream from McKay Creek, and at mile 55.2 (88.8 km).

DRAINAGE AREA.--637 mi^2 (1,650 km^2).

PERIOD OF RECORD.--February 1891 to July 1892, May 1903 to June 1905 (gage heights and discharge measurements only June to December 1904), October 1934 to current year. Monthly discharge only February 1891 to July 1892, published in WSP 1318.

REVISED RECORDS.--WSP 1398: 1904, 1937.

GAGE.--Water-stage recorder. Altitude of gage is 1,050 ft (320 m), from topographic map. Apr. 24 to Aug. 26, 1959, nonrecording gage and Aug. 27, 1959, to Feb. 4, 1965, water-stage recorder at same site at datum of 1,067.01 ft (325.225 m). Feb. 5 to Nov. 18, 1965, wire-weight gage at Main Street bridge site. Nov. 19, 1965, to Mar. 28, 1967, water-stage recorder at site 0.7 mi (1.1 km) upstream at datum of 1,067.60 ft (325.404 m) and Nov. 19, 1965, to Sept. 30, 1969, at site 0.7 mi (1.1 km) upstream at datum of 1,064.02 ft (324.313 m). See WSP 1738 for history of changes prior to Apr. 24, 1959.

REMARKS.--Records good. No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--44 years (water years 1935-78), 500 ft^3/s (14.16 m^3/s), 362,200 acre-ft/yr (447 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft^3/s (439 m^3/s) Jan. 30, 1965, gage height, 9.40 ft (2.865 m), datum then in use; minimum, 10 ft^3/s (0.28 m^3/s) July 13-16, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 17,000 ft^3/s (481 m^3/s) Dec. 14, 1882 (date and discharge from data furnished by Corps of Engineers). Flood of May 30, 31, 1906, reached a stage of 11.0 ft (3.35 m), 1934-58 site and datum, but before channel was improved, discharge, 15,500 ft^3/s (439 m^3/s), estimated by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft^3/s (99.1 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 3	0045	*6,000	170	*9.10	2.774	Dec. 13	2330	5,200	147	8.70	2.652

Minimum, 29 ft^3/s (0.82 m^3/s) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	101	803	307	599	1060	1150	983	220	106	44	54
2	144	104	1720	295	608	956	1200	902	207	150	41	54
3	132	119	3660	350	659	884	1100	803	199	178	42	52
4	119	122	1750	450	794	830	1030	704	199	124	41	52
5	110	124	1300	650	848	785	980	659	171	117	44	54
6	106	124	1020	902	1080	740	1000	625	165	108	43	62
7	104	124	875	758	1310	740	1040	591	153	101	40	71
8	106	124	758	731	1370	767	1060	574	150	131	35	84
9	99	122	650	947	1320	1090	1020	540	139	112	36	74
10	99	122	582	1010	1200	1610	960	565	139	106	34	72
11	97	119	557	938	1070	1620	902	565	156	93	30	74
12	93	117	565	875	947	1430	800	506	136	91	37	69
13	91	122	1960	857	866	1260	750	480	136	84	49	69
14	87	129	4240	884	785	1130	680	446	132	78	49	67
15	87	139	3500	1070	713	1010	640	565	124	76	55	65
16	84	211	2330	1280	659	911	700	650	117	72	63	62
17	80	245	1680	1300	616	875	780	641	112	74	58	60
18	76	235	1330	1370	582	866	760	573	108	69	55	69
19	76	215	1080	1290	574	911	780	531	104	65	55	71
20	78	190	893	1120	582	983	812	480	97	67	58	65
21	78	178	812	965	616	1020	785	463	87	63	63	62
22	78	178	722	911	659	1050	722	471	82	57	71	63
23	78	174	677	821	740	1080	695	420	87	54	74	60
24	76	182	582	749	794	1100	625	388	93	52	65	57
25	80	675	514	686	920	1040	616	360	97	49	60	58
26	87	1770	489	686	1060	1000	642	332	101	50	62	53
27	84	1300	472	650	1190	1030	947	319	91	52	58	50
28	84	1080	455	625	1170	1060	857	313	84	48	55	52
29	89	983	446	616	---	1070	1090	283	91	50	53	52
30	91	902	446	608	---	1100	1010	271	110	48	52	50
31	93	---	429	591	---	1090	---	250	---	46	56	---
TOTAL	2942	10330	37297	25292	24331	32098	26133	16253	3887	2571	1578	1857
MEAN	94.9	344	1203	816	869	1035	871	524	130	82.9	50.9	61.9
MAX	156	1770	4240	1370	1370	1620	1200	983	220	178	74	84
MIN	76	101	429	295	574	740	616	250	82	46	30	50
AC-FT	5840	20490	73980	50170	48260	63670	51830	32240	7710	5100	3130	3680

CAL YR 1977 TOTAL 112924 MEAN 309 MAX 4240 MIN 24 AC-FT 224000
WTR YR 1978 TOTAL 184569 MEAN 506 MAX 4240 MIN 30 AC-FT 366100

14022200 NORTH FORK MCKAY CREEK NEAR PILOT ROCK, OR

LOCATION.--Lat 45°30'24", long 118°36'57", in NE¼SE¼ sec.1, T.1 S., R.33 E., Umatilla County, Hydrologic Unit 17070103, Umatilla Indian Reservation, on left bank 10 mi (16 km) northeast of Pilot Rock and at mile 0.5 (0.8 km).

DRAINAGE AREA.--48.6 mi^2 (125.9 km^2).

PERIOD OF RECORD.--May 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,870 ft (570 m), from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--5 years, 43.6 ft^3/s (1.235 m^3/s), 31,590 acre-ft/yr (39.0 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980 ft^3/s (56.1 m^3/s) Jan. 25, 1975, gage height, 8.48 ft (2.585 m), from floodmark, from rating curve extended above 150 ft^3/s (4.25 m^3/s) on basis of slope-area measurement of peak flow; minimum, 0.30 ft^3/s (0.008 m^3/s) July 15, 1975 (result of temporary dam construction upstream).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 290 ft^3/s (8.21 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 13	1330	*572	16.2	*4.08	1.244	Apr. 28	0300	330	9.35	3.08	0.939

Minimum, 0.53 ft^3/s (0.015 m^3/s) Aug. 8-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	3.8	48	22	52	92	57	115	10	3.5	.90	1.3
2	11	5.2	95	20	53	79	60	93	9.4	5.8	.85	1.1
3	9.4	5.5	111	26	74	70	62	76	8.6	6.1	.80	1.1
4	8.2	5.2	78	50	80	63	64	65	7.8	5.2	.71	1.1
5	7.1	5.2	60	120	83	58	69	59	7.1	4.6	.71	1.1
6	6.4	4.9	53	129	149	59	76	51	6.7	3.8	.71	1.3
7	6.7	4.6	43	95	147	65	99	43	6.1	3.3	.71	1.6
8	6.7	4.6	35	120	124	89	109	36	5.8	3.1	.64	1.7
9	6.1	4.3	28	156	111	191	96	34	5.5	2.5	.64	1.4
10	5.8	4.0	28	167	98	167	83	33	6.7	2.3	.60	1.7
11	5.5	3.8	29	138	86	141	71	29	6.7	2.1	.67	1.6
12	4.9	3.8	29	124	74	134	62	25	5.5	1.9	.76	1.5
13	4.6	4.6	257	122	66	125	55	26	5.5	1.8	1.0	1.5
14	4.3	5.5	247	122	59	115	48	27	5.2	1.7	1.0	1.5
15	4.0	8.2	219	138	56	107	45	42	4.6	1.7	1.4	1.5
16	3.8	9.4	152	129	50	98	55	50	4.3	1.6	1.5	1.6
17	3.5	9.0	117	134	46	90	62	44	3.8	1.6	1.3	2.5
18	3.3	8.6	96	131	45	82	80	39	3.5	1.5	1.1	2.5
19	3.3	8.2	79	112	52	73	83	35	3.3	1.4	1.0	2.1
20	3.1	7.4	69	95	57	65	79	31	3.1	1.3	1.1	1.9
21	2.8	7.4	59	86	57	58	73	29	2.8	1.3	1.2	1.8
22	2.8	7.4	53	76	56	53	69	28	2.5	1.2	1.7	1.8
23	2.5	7.1	48	68	53	55	65	25	2.8	1.2	1.7	1.8
24	2.5	20	43	59	62	52	59	23	3.1	1.2	1.4	1.7
25	3.1	197	39	57	70	46	55	21	4.0	1.1	1.3	1.7
26	3.1	122	36	60	85	43	60	19	3.5	1.1	1.3	1.7
27	3.1	79	32	57	101	41	163	18	2.8	1.1	1.1	1.7
28	2.8	78	29	57	104	37	284	17	2.5	1.1	1.1	1.7
29	2.8	63	28	58	---	34	159	14	2.5	1.1	1.0	1.7
30	2.8	48	28	55	---	30	150	13	2.5	1.0	1.2	1.7
31	3.1	---	23	53	---	28	---	12	---	.96	1.4	---
TOTAL	152.1	744.7	2291	2841	2150	2440	2592	1172	148.2	69.16	32.50	48.9
MEAN	4.91	24.8	73.9	91.6	76.8	78.7	86.4	37.8	4.94	2.23	1.05	1.63
MAX	13	197	257	167	149	191	284	115	10	6.1	1.7	2.5
MIN	2.5	3.8	23	20	45	28	45	12	2.5	.96	.60	1.1
AC-FT	302	1480	4540	5640	4260	4840	5140	2320	294	137	64	97

CAL YR 1977 TOTAL 6846.21 MEAN 18.8 MAX 257 MIN .64 AC-FT 13580
WTR YR 1978 TOTAL 14681.56 MEAN 40.2 MAX 284 MIN .60 AC-FT 29120

14022500 MCKAY CREEK NEAR PILOT ROCK, OR

LOCATION.--Lat 45°32'57", long 118°46'24", in NW¼SE¼ sec.23, T.1 N., R.32 E., Umatilla County, Hydrologic Unit 17070103, on left bank 500 ft (152 m) upstream from county road bridge, 5.5 mi (8.8 km) northeast of Pilot Rock, and at mile 8.2 (13.2 km).

DRAINAGE AREA.--180 mi² (466 km²).

PERIOD OF RECORD.--May to August 1921, October 1926 to June 1928, December 1928 to July 1929, October 1929 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1398: 1928-29, 1933, 1940.

GAGE.--Water-stage recorder. Datum of gage is 1,343.60 ft (409.529 m) National Geodetic Vertical Datum of 1929. See WSP 1318 or 1738 for history of changes prior to Apr. 9, 1941. Apr. 9, 1941, to July 24, 1963, at site 1,000 ft (305 m) downstream at datum 7.92 ft (2.414 m) lower.

REMARKS.--Records good. No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--50 years (water years 1927, 1930-78), 98.4 ft³/s (2.787 m³/s), 71,290 acre-ft/yr (87.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,400 ft³/s (210 m³/s) Jan. 30, 1965, gage height, 8.40 ft (2.560 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 840 ft³/s (23.8 m³/s) and maximum discharge, 840 ft³/s (23.8 m³/s) Apr. 28, gage height, 3.65 ft (1.113 m); no flow Aug. 8-11, 14, 17-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	9.2	115	38	145	315	182	335	30	2.2	.46	2.2
2	8.3	9.7	175	32	136	259	175	268	28	2.4	.40	2.1
3	7.4	12	226	33	163	226	172	218	24	2.7	.32	2.1
4	6.9	12	172	123	175	190	175	169	19	2.7	.28	2.1
5	6.6	12	136	378	179	170	193	151	16	2.9	.28	2.1
6	6.9	12	113	378	277	151	218	136	13	2.6	.28	2.2
7	7.8	12	93	246	300	182	268	112	12	2.4	.12	2.4
8	9.7	13	78	226	282	246	345	95	8.7	2.1	.00	2.6
9	12	12	66	286	259	635	335	86	5.3	2.1	.00	2.7
10	12	12	61	330	277	622	290	86	4.2	2.0	.00	2.9
11	12	12	60	282	214	494	238	78	4.9	1.8	.00	2.9
12	11	12	58	268	[illegible]	450	199	72	5.2	2.0	.02	3.1
13	11	13	327	268	163	411	172	70	5.5	2.0	.08	3.5
14	11	13	411	259	145	362	154	72	5.7	1.7	.00	4.0
15	9.7	14	389	291	136	320	139	86	6.0	1.6	.13	4.6
16	9.2	17	264	295	118	291	157	102	4.6	1.5	.16	4.9
17	8.7	19	200	295	113	264	172	95	3.3	1.4	.00	5.5
18	8.7	19	157	295	110	250	218	88	2.9	1.4	.00	6.6
19	8.3	19	133	255	127	242	226	82	2.6	.88	.00	6.9
20	8.3	18	108	214	169	234	218	84	2.6	.82	.03	6.9
21	8.3	17	95	196	179	222	200	70	2.4	.76	.12	6.9
22	7.8	17	82	186	179	210	190	70	2.2	.70	1.7	5.5
23	7.8	16	72	169	169	210	175	64	2.2	.64	2.9	5.5
24	6.9	22	66	151	182	200	160	58	2.6	.58	1.8	6.3
25	7.8	182	60	145	210	175	154	55	2.6	.58	1.8	6.3
26	8.7	433	49	166	264	166	160	52	2.4	.52	1.6	6.3
27	8.7	189	54	166	356	160	396	49	2.2	.52	1.6	6.3
28	8.7	210	51	163	373	151	742	47	2.2	.52	1.6	6.3
29	8.7	179	51	163	---	139	583	43	2.1	.52	1.8	6.3
30	8.3	130	49	157	---	127	449	39	2.4	.52	2.2	6.3
31	8.7	---	45	151	---	115	---	32	---	.52	2.6	---
TOTAL	275.9	1666.9	4016	6605	5582	8189	7455	3064	226.8	45.58	22.28	134.3
MEAN	8.90	55.6	130	213	199	264	249	98.8	7.56	1.47	.72	4.48
MAX	12	433	411	378	373	635	742	335	30	2.9	2.9	6.9
MIN	6.6	9.2	45	32	110	115	139	32	2.1	.52	.00	2.1
AC-FT	547	3310	7970	13100	11070	16240	14790	6080	450	90	44	266

CAL YR 1977 TOTAL 15502.30 MEAN 42.5 MAX 433 MIN .00 AC-FT 30750
WTR YR 1978 TOTAL 37282.76 MEAN 102 MAX 742 MIN .00 AC-FT 73950

14023000 MCKAY RESERVOIR NEAR PENDLETON, OR

LOCATION.--Lat 45°36'28", long 118°47'30", in SE¼ sec.34, T.2 N., R.32 E., Umatilla County, Hydrologic Unit 17070103, on Bureau of Reclamation land, near right end of McKay Dam on McKay Creek, 4.0 mi (6.4 km) south of Pendleton, and at mile 4.9 (7.9 km).

DRAINAGE AREA.--186 mi^2 (482 km^2).

PERIOD OF RECORD.--December 1927 to current year.

REVISED RECORDS.--WSP 1154: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.16 ft (0.049 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 6, 1973, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by gravel-fill dam with concrete facing, completed in 1926; storage began in 1927. Usable capacity, 73,830 acre-ft (91.0 hm^3), between gage heights 1,182.0 ft (360.27 m), floor of trashrack structure, and 1,322.0 ft (402.95 m) top of spillway gates. Dead storage, about 6 acre-ft (7,400 m^3), included in records. Water is used for irrigation of land along McKay Creek and Umatilla River.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 73,840 acre-ft (91.0 hm^3) June 9, 1950, gage height, 1,322.0 ft (402.95 m); no usable contents Sept. 7, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 68,650 acre-ft (84.6 hm^3) May 1, gage height, 1,317.79 ft (401.662 m); minimum, 1,580 acre-ft (1.95 hm^3) Oct. 1, gage height, 1,209.78 ft (368.741 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30	1,209.77	1,580	-
Oct. 31	1,212.39	1,980	+400
Nov. 30	1,225.33	5,440	+3,460
Dec. 31	1,249.47	15,340	+9,900
CAL YR 1977	-	-	+3,010
Jan. 31	1,274.34	29,650	+14,310
Feb. 28	1,289.52	40,740	+11,090
Mar. 31	1,306.80	56,480	+15,740
Apr. 30	1,317.79	68,650	+12,170
May 31	1,317.17	67,900	-750
June 30	1,305.29	54,950	-12,950
July 31	1,286.03	37,990	-16,960
Aug. 31	1,266.87	24,890	-13,100
Sept.30	1,212.39	1,980	-22,910
WTR YR 1978	-	-	+400

14023500 MCKAY CREEK NEAR PENDLETON, OR

LOCATION.--Lat 45°36'34", long 118°47'55", in SE¼NW¼ sec.34, T.2 N., R.32 E., Umatilla County, Hydrologic Unit 17070103, on right bank 35 ft (11 m) upstream from diversion dam, 0.2 mi (0.3 km) downstream from McKay Dam, 4.5 mi (7.2 km) south of Pendleton, and at mile 4.7 (7.6 km).

DRAINAGE AREA.--186 mi^2 (482 km^2).

PERIOD OF RECORD.--November 1918 to May 1919, October 1919 to September 1923, October 1924 to September 1927, November 1927 to September 1943, April 1944 to October 1947 (irrigation seasons only), March 1948 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1154: Drainage area. WSP 1398: 1923.

GAGE.--Water-stage recorder. Concrete control since Mar. 23, 1928. Datum of gage is 1,163.71 ft (354.699 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). See WSP 1318 or 1738 for history of changes prior to Nov. 16, 1948.

REMARKS.--Records good except those for September, which are fair. Flow completely regulated since 1927 by McKay Reservoir (see station 14023000). Many diversions for irrigation above station. Since 1932, records have excluded flow in Elder ditch which, since 1953, has diverted not over 1.5 ft^3/s (0.042 m^3/s) at station for irrigation during season and up to 1 ft^3/s (0.03 m^3/s) seepage from reservoir, for stock water at other times.

AVERAGE DISCHARGE.--41 years (water years 1933-43, 1949-78), 92.8 ft^3/s (2.628 m^3/s), 67,230 acre-ft/yr (82.9 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 3,250 ft^3/s (92.0 m^3/s) Feb. 10, 1921, gage height, 4.4 ft (1.34 m), site and datum then in use, from rating curve extended above 1,200 ft^3/s (34.0 m^3/s); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 350 ft^3/s (9.91 m^3/s) July 25-27, gage height, 1.50 ft (0.457 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	310	55	256	342	95
2	.00	.00	.00	.00	.00	.00	.00	310	87	256	330	93
3	.00	.00	.00	.00	.00	.00	.00	310	123	225	322	93
4	.00	.00	.00	.00	.00	.00	.00	310	128	211	322	93
5	.00	.00	.00	.00	.00	.00	.00	282	130	211	318	106
6	.00	.00	.00	.00	.00	.00	.00	263	130	211	318	113
7	.00	.00	.00	.00	.00	.00	.00	260	149	211	318	113
8	.00	.00	.00	.00	.00	.00	.00	117	176	211	314	111
9	.00	.00	.00	.00	.00	.00	.00	28	214	211	314	111
10	.00	.00	.00	.00	.00	.00	.00	26	239	211	273	111
11	.00	.00	.00	.00	.00	.00	.00	26	239	211	310	85
12	.00	.00	.00	.00	.00	.00	.00	38	239	211	310	69
13	.00	.00	.00	.00	.00	.00	.00	47	228	225	314	83
14	.00	.00	.00	.00	.00	.00	.00	47	218	246	294	111
15	.00	.00	.00	.00	.00	.00	.00	47	207	246	260	115
16	.00	.00	.00	.00	.00	.00	.00	77	207	246	225	113
17	.00	.00	.00	.00	.00	.00	.00	100	204	246	176	111
18	.00	.00	.00	.00	.00	.00	.00	81	204	253	161	111
19	.00	.00	.00	.00	.00	.00	.00	71	214	278	164	128
20	.00	.00	.00	.00	.00	.00	.00	73	246	274	173	146
21	.00	.00	.00	.00	.00	.00	.00	73	286	290	176	149
22	.00	.00	.00	.00	.00	.00	.00	73	306	302	103	140
23	.00	.00	.00	.00	.00	.00	.00	52	306	302	69	133
24	.00	.00	.00	.00	.00	.00	.00	41	310	318	73	135
25	.00	.00	.00	.00	.00	.00	.00	28	306	346	81	135
26	.00	.00	.00	.00	.00	.00	.00	22	306	350	85	135
27	.00	.00	.00	.00	.00	.00	.00	23	294	350	87	135
28	.00	.00	.00	.00	.00	.00	100	23	286	346	89	89
29	.00	.00	.00	.00	---	.00	278	23	270	346	93	.00
30	.00	.00	.00	.00	---	.00	306	23	256	342	95	.00
31	.00	---	.00	.00	---	.00	---	23	---	342	95	---
TOTAL	.00	.00	.00	.00	.00	.00	684.00	3227	6563	8284	6604	3162.00
MEAN	.000	.000	.000	.000	.000	.000	22.8	104	219	267	213	105
MAX	.00	.00	.00	.00	.00	.00	306	310	310	350	342	149
MIN	.00	.00	.00	.00	.00	.00	.00	22	55	211	69	.00
AC-FT	.00	.00	.00	.00	.00	.00	1360	6400	13020	16430	13100	6270

CAL YR 1977 TOTAL 15299.90 MEAN 41.9 MAX 360 MIN .00 AC-FT 30350
WTR YR 1978 TOTAL 28524.00 MEAN 78.1 MAX 350 MIN .00 AC-FT 56580

14026000 UMATILLA RIVER AT YOAKUM, OR

LOCATION.--Lat 45°40'40", long 119°02'00", in SW¼ sec.2, T.2 N., R.30 E., Umatilla County, Hydrologic Unit 17070103, at left bank on downstream side of highway bridge, 0.5 mi (0.8 km) northeast of Yoakum, 2.5 mi (4.0 km) downstream from abandoned Furnish Reservoir, 12.0 mi (19.3 km) downstream from Birch Creek, and at mile 37.7 (60.7 km).

DRAINAGE AREA.--1,280 mi^2 (3,320 km^2), approximately.

PERIOD OF RECORD.--May 1903 to current year. Published as "above Furnish Reservoir, near Yoakum" October 1916 to September 1934.

REVISED RECORDS.--WSP 794: 1906(M). WSP 1398: 1904-6, 1908-9, 1922-23, 1926, 1936.

GAGE.--Water-stage recorder. Datum of gage is 768.21 ft (234.150 m) National Geodetic Vertical Datum of 1929. See WSP 1318 or 1738 for history of changes prior to Oct. 21, 1948.

REMARKS.--Records good. Slight regulation by Furnish Reservoir 1910-34, capacity, 3,900 acre-ft (4.81 hm^3) prior to filling with silt. Flow regulated to some extent since 1927 by McKay Reservoir (see station 14023000). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--75 years, 670 ft^3/s (18.97 m^3/s), 485,400 acre-ft/yr (598 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft^3/s (566 m^3/s) May 30, 1906, gage height, about 15.0 ft (4.57 m), site and datum then in use, from floodmarks, from rating curve extended above 6,600 ft^3/s (187 m^3/s); minimum, 12 ft^3/s (0.34 m^3/s) Aug. 10-12, 1908, Aug. 4, 1910.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,600 ft^3/s (102 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 3	0400	*6,690	189	*7.44	2.268	Apr. 28	1030	3,900	110	5.83	1.777
Dec. 14	0300	5,570	158	7.05	2.149						

Minimum daily, 63 ft^3/s (1.78 m^3/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	102	836	381	644	1420	1830	2120	316	397	372	148
2	150	104	1320	300	644	1240	1550	1830	329	407	369	148
3	135	115	4840	350	724	1070	1370	1620	354	562	355	148
4	122	124	2380	475	812	950	1230	1450	350	383	345	145
5	113	124	1570	914	905	869	1200	1320	346	364	344	145
6	109	127	1130	1210	1420	860	1180	1160	333	352	343	154
7	107	124	896	980	1650	896	1260	1060	329	344	341	170
8	109	124	756	878	1700	970	1320	872	350	380	332	191
9	100	122	630	1230	1580	1820	1250	670	363	358	333	185
10	104	122	547	1360	1420	2330	1170	692	395	342	302	185
11	100	120	517	1270	1260	2090	1090	686	410	323	318	170
12	98	117	523	1140	1090	1850	1000	644	395	315	324	155
13	94	120	1480	1110	950	1590	905	630	381	311	338	152
14	94	124	4870	1140	820	1410	828	686	360	326	330	178
15	92	137	4390	1390	732	1240	772	732	342	318	311	180
16	92	173	3120	1720	665	1090	640	828	334	312	282	175
17	90	227	2200	1780	611	1000	942	852	332	307	246	171
18	90	227	1740	1870	565	1050	936	796	328	304	207	180
19	86	216	1410	1690	553	1150	939	724	327	327	205	199
20	86	200	1130	1440	578	1300	983	679	347	327	209	211
21	86	185	941	1230	644	1330	965	644	373	326	220	211
22	86	180	828	1120	716	1350	909	644	399	349	450	203
23	86	175	756	990	812	1450	873	578	414	344	178	193
24	86	185	679	852	923	1460	796	517	425	346	158	192
25	85	366	598	788	1180	1270	764	475	427	379	155	193
26	88	1900	553	804	1460	1230	614	425	429	386	154	190
27	90	1550	510	732	163[illegible]	1330	1540	395	418	389	153	185
28	90	1210	475	679	1580	1340	3720	381	388	384	150	153
29	92	1060	463	679	---	1340	3210	363	385	380	148	76
30	92	990	457	658	---	1350	2560	342	401	376	148	63
31	94	---	430	637	---	1290	---	316	---	375	148	---
TOTAL	3091	10650	42975	31797	28268	40935	38736	25131	11080	11093	8268	5049
MEAN	99.7	355	1386	1026	1010	1320	1291	811	369	358	267	168
MAX	150	1900	4870	1870	1700	2330	3720	2120	429	562	450	211
MIN	85	102	430	300	553	860	764	316	316	304	148	63
AC-FT	6130	21120	85240	63070	56070	81190	76830	49850	21980	22000	16400	10010

CAL YR 1977 TOTAL 137665 MEAN 377 MAX 4870 MIN 46 AC-FT 273100
WTR YR 1978 TOTAL 257073 MEAN 704 MAX 4870 MIN 63 AC-FT 509900

14032000 BUTTER CREEK NEAR PINE CITY, OR

LOCATION.--Lat 45°32'40", long 119°18'40", in SW¼ sec.22, T.1 N., R.28 E., Morrow County, Hydrologic Unit 17070103, on right bank 0.5 mi (0.8 km) downstream from Mattlock Canyon, 6.0 mi (9.7 km) southeast of Pine City, 15 mi (24 km) southwest of Echo, and at mile 8.4 (13.5 km).

DRAINAGE AREA.--291 mi^2 (754 km^2).

PERIOD OF RECORD.--April to June 1928, November 1928 to June 1929, October 1929 to September 1930, January 1931 to September 1932, February to June 1933, October 1933 to September 1941, January to June 1942, October 1942 to current year. Prior to October 1945, monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1218: 1950(M).

GAGE.--Water-stage recorder. Altitude of gage is 1,400 ft (427 m) by barometer. Prior to Oct. 1, 1944, at datum 1.1 ft (0.34 m) higher and Oct. 1, 1944, to Sept. 6, 1949, at datum 1.0 ft (0.30 m) higher.

REMARKS.--Records good. No regulation. Several small diversions for irrigation above station. Water is diverted into headwaters of Buttor Creek from Fivemile Creek, a tributary of Camas Creek in John Day River basin, for irrigation below station.

AVERAGE DISCHARGE.--46 years (water years 1930, 1932, 1934-41, 1943-78), 25.2 ft^3/s (0.714 m^3/s), 18,260 acre-ft/yr (22.5 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,800 ft^3/s (108 m^3/s) Feb. 21, 1949, gage height, 12.4 ft (3.78 m), present datum, from floodmark, from rating curve extended above 440 ft^3/s (12.5 m^3/s) on basis of computation of peak flow over dam; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 200 ft^3/s (5.66 m^3/s) and maximum discharge, 314 ft^3/s (8.89 m^3/s) Mar. 9, gage height, 4.15 ft (1.265 m); minimum, 0.30 ft^3/s (0.008 m^3/s) Aug. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	1.6	14	9.4	29	113	139	50	13	16	1.0	3.2
2	.54	1.8	13	6.0	28	94	170	46	12	21	.94	3.0
3	.58	1.8	20	7.2	28	82	132	43	12	31	1.0	2.8
4	.58	2.3	26	22	29	75	109	40	10	25	.76	2.5
5	.66	2.5	20	60	34	67	98	40	9.4	21	.63	2.5
6	.70	2.6	18	38	49	67	90	38	9.1	17	.63	3.0
7	.79	2.5	15	28	71	107	91	34	8.0	14	.60	4.1
8	.88	2.5	13	25	142	124	83	32	7.5	12	.53	4.0
9	.88	2.5	12	35	104	232	76	30	7.0	10	.49	3.6
10	.88	2.6	12	57	88	177	68	30	7.0	8.4	.42	3.6
11	.97	2.6	12	51	75	143	63	29	7.5	7.5	.33	3.6
12	.97	1.9	12	49	59	120	59	25	8.0	6.4	.49	4.0
13	.97	1.9	13	64	57	105	55	24	9.1	5.9	.82	4.0
14	.97	1.8	92	75	49	94	53	25	9.4	5.2	.82	4.0
15	.97	2.5	85	88	45	82	50	28	9.4	4.3	.88	4.0
16	.97	2.8	71	88	38	76	51	29	8.7	3.8	1.2	3.8
17	1.1	2.5	46	86	36	72	51	25	8.0	3.6	1.7	3.8
18	1.1	2.2	35	81	34	73	46	22	7.5	3.8	1.7	4.1
19	1.1	2.0	27	70	39	71	41	20	6.7	3.5	1.6	4.1
20	1.1	2.0	18	64	72	70	38	18	6.4	2.9	1.8	4.1
21	.97	2.0	18	59	58	70	39	18	5.7	2.6	2.1	4.1
22	.97	2.0	16	57	54	70	36	19	5.2	2.5	2.9	4.0
23	.97	2.0	16	49	54	74	37	18	5.7	2.0	2.9	4.0
24	1.2	2.5	16	40	56	79	36	18	7.5	1.9	3.2	3.8
25	1.2	5.0	14	35	84	76	33	17	8.7	2.0	3.0	3.6
26	1.4	10	14	39	109	72	44	16	8.0	1.9	2.8	3.5
27	1.4	18	14	36	152	72	65	16	6.7	1.8	2.8	3.3
28	1.9	14	15	34	136	72	63	16	6.2	1.8	2.8	3.2
29	1.8	13	13	34	---	72	56	16	5.7	1.6	2.5	3.0
30	1.6	12	14	34	---	70	53	15	16	1.4	2.5	3.2
31	1.6	---	14	31	---	70	---	14	---	1.1	2.9	---
TOTAL	32.30	125.4	738	1451.6	1809	2841	2025	811	251.1	242.9	48.74	107.5
MEAN	1.04	4.18	23.8	46.8	64.6	91.6	67.5	26.2	8.37	7.84	1.57	3.58
MAX	1.9	18	92	88	152	232	170	50	16	31	3.2	4.1
MIN	.54	1.6	12	6.0	28	67	33	14	5.2	1.1	.33	2.5
AC-FT	64	249	1460	2880	3590	5640	4020	1610	498	482	97	213

CAL YR 1977 TOTAL 3410.22 MEAN 9.34 MAX 92 MIN .00 AC-FT 6760
WTR YR 1978 TOTAL 10483.54 MEAN 28.7 MAX 232 MIN .33 AC-FT 20790

PRINCIPAL DIVERSIONS FROM UMATILLA RIVER BETWEEN YOAKUM AND UMATILLA GAGING STATIONS, OR

The following canals divert water from Umatilla River between Yoakum and Umatilla, in Umatilla County, Hydrologic Unit 17070103:

14027000 FURNISH CANAL NEAR ECHO diverts from right bank of Umatilla River in SW¼SW¼ sec.31, T.3 N., R.30 E., for irrigation in vicinity of Stanfield. Records available March 1921 to current year (prior to October 1929 and March 1935 to September 1937 irrigation seasons only). Monthly figures only for irrigation seasons 1921-25, published in WSP 1318.

14029000 UMATILLA PROJECT FEED CANAL NEAR ECHO diverts from right bank of Umatilla River in SW¼ sec.22, T.3 N., R.29 E., and delivers water to Cold Springs Reservoir, capacity, 52,380 acre-ft (64.4 hm^3) of Bureau of Reclamation. Records available October 1920 to current year (incomplete 1928, 1943-44).

14030000 ALLEN CANAL AT ECHO diverts from right bank of Western Land Canal, 0.5 mi (0.8 km) downstream from headgate of that canal in SW¼ sec.16, T.3 N., R.29 E., for irrigation west of Echo. Records available May 1921 to current year (irrigation seasons only in most years). Monthly figures only October to December 1923, published in WSP 1318. Published as Western Land & Irrigation Co.'s canal at Echo 1921-39.

14030500 WESTERN LAND CANAL NEAR ECHO diverts from left bank of Umatilla River in NE¼ sec.21, T.3 N., R.29 E., for irrigation west of Echo and Stanfield. Gage is 1 mi (2 km) downstream from intake. Records available May 1921 to current year (irrigation seasons only in many years). Published as Western Land & Irrigation Co.'s canal at Echo 1921-39.

14031500 MAXWELL CANAL NEAR HERMISTON diverts from right bank of Umatilla River in SW¼ sec.20, T.4 N., R.28 E., for irrigation near Hermiston; at times it receives water from Cold Springs Reservoir. Records available March 1921 to current year (irrigation seasons only in most years). REVISIONS (WATER YEARS).--WSP 1398: 1921.

14032500 WEST DIVISION MAIN CANAL NEAR UMATILLA diverts from left bank of Umatilla River in SW¼ sec.28, T.5 N., R.28 E., for irrigation near Irrigon and Boardman. Records of monthly figures April 1921 to current year (incomplete October 1925 to March 1927). Published as "Main canal, west division Umatilla project" 1921, 1923. REVISIONS (WATER YEARS).--WSP 1398: 1923.

Water diverted by all of these canals is used for irrigation of lands on both sides of Umatilla River near and below Echo, except that diverted by West Division main canal which is applied to land along Columbia River in vicinity of Irrigon.

Several small canals also divert water between Yoakum and Umatilla, but no records for these were obtained.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	FURNISH CANAL	UMATILLA PROJECT FEED CANAL	ALLEN CANAL	WESTERN LAND CANAL	MAXWELL CANAL	WEST DIVISION MAIN CANAL
OCTOBER	0	0	329	4,500	542	3,400
NOVEMBER	0	3,320	0	556	0	129
DECEMBER	0	13,700	0	2,580	0	0
JANUARY	0	10,180	0	2,080	0	0
FEBRUARY	0	10,340	0	2,530	0	0
MARCH	0	13,740	6.3	2,190	207	0
APRIL	3,170	9,040	704	8,930	3,450	7,630
MAY	6,330	7,040	958	11,850	3,770	9,390
JUNE	7,350	0	681	12,130	2,420	6,450
JULY	6,860	0	964	11,210	2,980	7,660
AUGUST	4,500	0	727	9,650	2,360	8,770
SEPTEMBER	2,830	0	530	6,620	1,810	7,040
WTR YR 1978	31,040	67,350	4,900	74,830	17,540	50,470

NOTE.--No gage-height record for months of little or no flow and short periods at other times.

14033500 UMATILLA RIVER NEAR UMATILLA, OR

LOCATION.--Lat 45°54'11", long 119°19'33", in SW¼NW¼ sec.21, T.5 N., R.28 E., Umatilla County, Hydrologic Unit 17070103, on left bank 1.6 mi (2.6 km) downstream from West Division main canal of Umatilla project, 1.2 mi (1.9 km) southeast of Umatilla, and at mile 2.1 (3.4 km).

DRAINAGE AREA.--2,290 mi^2 (5,930 km^2), approximately.

PERIOD OF RECORD.--October 1903 to current year.

REVISED RECORDS.--WSP 794: Drainage area. WSP 1398: 1909, 1911, 1914, 1928, 1935.

GAGE.--Water-stage recorder. Datum of gage is 330.47 ft (100.727 m) National Geodetic Vertical Datum of 1929. Oct. 21, 1903, to Jan. 25, 1931, nonrecording gage.

REMARKS.--Records good. Some regulation since 1927 by McKay Reservoir (see station 14023000). Many diversions above station for irrigation of lands above and below station; Brownell Canal diverts below station. Diversions since 1908 to Cold Springs Reservoir, an off-channel reservoir, capacity, 52,380 acre-ft (64.6 hm^3).

AVERAGE DISCHARGE.--51 years (water years 1928-78), 441 ft^3/s (12.49 m^3/s), 319,500 acre-ft/yr (394 hm^3/yr). Water years prior to 1928 not included in computation of average discharge owing to increased regulation and diversion since 1927.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,800 ft^3/s (561 m^3/s) Jan. 30, 1965, gage height, 10.75 ft (3.277 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,100 ft^3/s (87.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 3	1330	*5,750	163	*5.84	1.780	Apr. 28	1600	3,230	91.5	5.01	1.527
Dec. 14	1130	5,230	148	5.71	1.740						

Minimum, 0.14 ft^3/s (0.004 m^3/s) Oct. 1-3, 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	97	668	170	350	1110	1350	1670	3.4	12	9.5	6.7
2	.14	138	579	180	350	974	1550	1300	5.0	12	9.0	6.7
3	.14	160	3750	220	542	806	1180	1010	7.0	94	8.2	6.7
4	.58	164	2690	337	700	689	961	863	7.0	117	7.6	6.7
5	.39	172	1550	569	752	617	924	710	7.0	91	7.3	7.6
6	.35	172	1070	1150	1010	560	899	498	7.0	91	7.3	7.0
7	.35	172	829	936	1460	607	911	383	7.3	47	7.0	6.7
8	.31	172	689	795	1570	617	974	356	6.7	28	7.0	7.3
9	.27	177	542	949	1300	1040	924	134	13	52	7.3	44
10	.24	177	450	1180	1150	2120	806	53	16	31	7.3	70
11	.14	177	397	1120	949	1930	689	75	16	8.2	7.3	53
12	.24	172	370	924	806	1670	579	75	15	7.9	7.9	27
13	.27	172	405	784	668	1410	474	55	12	7.6	7.9	13
14	.24	172	4380	773	560	1190	356	52	12	6.7	23	11
15	.27	181	4520	899	465	1000	282	124	12	6.7	42	11
16	.27	105	3470	1290	412	875	282	331	11	6.7	72	12
17	.58	75	2190	1350	356	795	474	397	11	7.3	50	9.9
18	1.5	86	1600	1470	325	762	282	397	11	7.6	39	9.9
19	25	94	1210	1380	307	852	269	343	11	7.6	13	9.0
20	2.4	86	899	1110	307	961	295	301	12	7.0	8.2	9.0
21	1.8	86	710	911	331	1040	307	263	13	6.7	7.6	9.0
22	1.3	98	598	784	390	1030	245	251	10	6.7	127	9.9
23	1.1	98	507	679	465	1070	223	234	10	6.7	218	11
24	1.1	160	450	569	560	1170	181	190	11	8.2	75	9.5
25	1.3	263	383	490	731	1030	127	172	11	10	77	9.0
26	1.3	1210	331	474	1000	924	105	138	11	10	52	9.0
27	1.3	1710	288	442	1260	987	313	91	11	10	44	11
28	1.5	1030	257	412	1270	1030	2530	60	11	10	34	9.0
29	12	863	240	390	---	1030	2830	58	10	10	12	8.2
30	20	752	234	376	---	1030	2210	48	10	10	8.6	7.0
31	53	---	218	356	---	987	---	19	---	9.0	7.0	---
TOTAL	129.62	9191	36474	23469	20346	31953	23532	10651	310.4	745.6	1010.0	426.8
MEAN	4.18	306	1177	757	727	1031	784	344	10.3	24.1	32.6	14.2
MAX	53	1710	4520	1470	1570	2120	2830	1670	16	117	218	70
MIN	.14	75	218	170	307	560	105	19	3.4	6.7	7.0	6.7
AC-FT	257	18230	72350	46550	40360	63380	46680	21130	616	1480	2000	847

CAL YR 1977 TOTAL 65722.08 MEAN 180 MAX 4520 MIN .14 AC-FT 130400
WTR YR 1978 TOTAL 158238.42 MEAN 434 MAX 4520 MIN .14 AC-FT 313900

14034500 WILLOW CREEK AT HEPPNER, OR

LOCATION.--Lat 45°21'02", long 119°32'56", in SE¼NW¼ sec.35, T.2 S., R.26 E., Morrow County, Hydrologic Unit 17070104, on right bank at Heppner, 100 ft (30 m) upstream from Court Street bridge, 800 ft (244 m) southeast of Morrow County courthouse, 0.3 mi (0.5 km) downstream from Balm Fork and at mile 52.2 (84.0 km).

DRAINAGE AREA.--87 mi^2 (225 km^2), approximately.

PERIOD OF RECORD.--May 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,952.73 ft (595.192 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. No regulation. Many diversions for irrigation above station. Part of flow of Ditch Creek (John Day River basin) is diverted to Willow Creek above station.

AVERAGE DISCHARGE.--27 years, 18.1 ft^3/s (0.513 m^3/s), 13,110 acre-ft/yr (16.2 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 812 ft^3/s (23.0 m^3/s) May 10, 1957, gage height, 6.15 ft (1.875 m), from rating curve extended above 230 ft^3/s (6.51 m^3/s); maximum gage height, 6.46 ft (1.969 m) May 25, 1971, backwater from Shobe Canyon; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, about 36,000 ft^3/s (1,020 m^3/s) June 14, 1903, result of slope-area measurement (see WSP 96). Discharge for flood of Feb. 22, 1949, was 1,700 ft^3/s (48.1 m^3/s), result of slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 123 ft^3/s (3.48 m^3/s) Mar. 9, gage height, 2.95 ft (0.899 m), no peak above base of 170 ft^3/s (4.81 m^3/s); no flow Oct. 16, 18-21, Aug. 6-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.02	16	8.0	19	68	75	60	8.0	6.9	.03	.28
2	.03	.02	15	8.0	19	57	76	51	7.3	17	.04	.28
3	.01	.02	20	23	19	50	68	42	7.3	14	.05	.25
4	.01	.02	18	51	18	46	61	39	7.3	13	.03	.21
5	.01	.03	17	72	19	39	55	33	3.7	11	.02	.23
6	.01	.03	16	54	26	39	48	28	3.3	6.4	.00	.23
7	.01	.03	14	45	32	44	48	25	3.3	4.2	.00	.26
8	.01	.04	12	43	46	55	45	22	3.2	4.7	.00	.30
9	.01	.04	11	48	46	109	42	13	2.9	4.2	.03	.28
10	.01	.04	10	58	43	113	39	12	3.6	4.2	.03	.30
11	.01	.04	10	59	40	96	35	11	4.5	3.7	.04	.41
12	.01	.04	10	72	34	83	31	11	4.8	3.3	.06	.52
13	.01	.06	12	73	35	73	29	13	7.7	2.2	.07	.63
14	.01	.06	20	73	30	64	27	14	7.4	1.7	.06	.69
15	.01	.06	30	75	27	54	25	18	6.9	1.2	.10	.80
16	.00	.07	30	71	21	47	[illegible]	16	6.7	.80	.07	.74
17	.01	.07	26	64	22	42	2[illegible]	13	5.6	.80	.06	.85
18	.00	.06	22	56	20	39	23	13	5.0	.80	.05	1.1
19	.00	.06	18	49	22	37	20	9.5	5.7	.69	.05	1.5
20	.00	.05	13	43	25	35	18	9.9	5.7	.63	.06	1.4
21	.00	.05	14	40	28	35	15	9.9	5.6	.58	.07	2.2
22	.01	.05	13	36	32	35	14	11	6.0	.47	.36	3.0
23	.01	.05	13	32	35	39	13	10	5.6	.41	.69	2.6
24	.01	.06	13	26	40	42	12	9.9	9.7	.30	.23	2.2
25	.02	25	13	28	53	39	13	10	9.6	.25	.19	2.0
26	.02	32	13	26	67	37	29	9.2	8.6	.19	.19	1.9
27	.02	24	13	20	88	37	74	10	6.7	.19	.17	1.5
28	.01	20	13	21	79	37	88	10	5.4	.17	.16	1.5
29	.01	18	13	21	---	38	87	9.2	6.0	.12	.14	1.5
30	.01	17	12	20	---	39	74	8.6	7.1	.04	.16	1.5
31	.02	---	10	20	---	40	---	8.3	---	.02	.21	---
TOTAL	.39	137.07	480	1335.0	985	1608	1237	559.5	180.2	104.16	3.42	31.16
MEAN	.013	4.57	15.5	43.1	35.2	51.9	41.2	18.0	6.01	3.36	.11	1.04
MAX	.08	32	30	75	88	113	88	60	9.7	17	.69	3.0
MIN	.00	.02	10	8.0	18	35	12	8.3	2.9	.02	.00	.21
AC-FT	.8	272	952	2650	1950	3190	2450	1110	357	207	6.8	62

CAL YR 1977 TOTAL 1992.01 MEAN 5.46 MAX 58 MIN .00 AC-FT 3950
WTR YR 1978 TOTAL 6660.90 MEAN 18.2 MAX 113 MIN .00 AC-FT 13210

14034800 RHEA CREEK NEAR HEPPNER, OR

LOCATION.--Lat 45°15'41", long 119°37'02", in NE¼SE¼ sec.31, T.3 S., R.26 E., Morrow County, Hydrologic Unit 17070104, on right bank 1.0 mi (1.6 km) downstream from Sanford Canyon, 8 mi (13 km) southwest of Heppner, and at mile 25.4 (40.9 km).

DRAINAGE AREA.--120 mi^2 (311 km^2), approximately.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,320 ft (707 m), from topographic map. Prior to May 28, 1976, at site 0.4 mi (0.6 km) downstream at different datum.

REMARKS.--Records good except those for October to December, August, September, which are fair. No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--18 years, 17.7 ft^3/s (0.501 m^3/s), 12,820 acre-ft/yr (15.8 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,280 ft^3/s (36.2 m^3/s) June 10, 1969, gage height, 7.05 ft (2.149 m), site and datum then in use, from rating curve extended above 130 ft^3/s (3.68 m^3/s) on basis of slope-area measurement at gage height 6.72 ft (2.048 m); maximum gage height, 7.41 ft (2.259 m) Dec. 22, 1964, site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 154 ft^3/s (4.36 m^3/s) Feb. 7, no peak above base of 230 ft^3/s (6.51 m^3/s); maximum gage height, 2.97 ft (0.905 m) Aug. 22, backwater from temporary dam; no flow Aug. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	1.6	21	11	24	72	45	44	10	2.4	.55	.55
2	2.0	1.5	20	14	23	62	39	39	8.1	8.9	.27	.68
3	1.8	1.5	19	35	24	54	35	35	6.4	11	.39	.75
4	1.7	1.4	17	105	24	50	34	31	5.7	9.2	.19	1.0
5	1.4	1.2	14	104	25	46	35	31	4.5	5.9	.15	1.1
6	2.2	1.6	14	78	40	48	34	27	4.4	2.1	.11	1.4
7	2.9	1.6	13	61	82	53	34	25	3.9	5.8	.27	1.7
8	5.3	1.1	11	68	119	61	35	23	3.3	6.1	.27	.94
9	3.8	.90	10	90	97	121	34	21	2.7	4.0	.11	.70
10	3.3	.79	10	101	80	113	33	19	2.8	3.3	.08	.50
11	2.8	.86	10	85	66	96	32	19	3.6	2.5	.00	.40
12	2.4	.69	10	96	53	83	30	17	3.2	1.9	.00	.36
13	2.3	.90	15	95	48	72	28	16	4.1	1.4	.27	.34
14	2.2	1.3	53	114	42	63	27	15	3.8	1.1	.94	.32
15	1.8	1.4	96	121	39	56	26	21	3.4	.78	.75	.29
16	1.7	1.5	68	113	34	50	26	22	2.7	.58	1.8	.28
17	1.7	1.3	51	98	32	45	25	22	2.4	.43	1.3	.28
18	1.3	1.1	39	80	31	41	24	20	2.4	.33	.94	.28
19	.81	.90	30	69	38	37	22	19	1.9	.24	.43	.33
20	.70	.75	24	61	42	34	21	17	2.0	.17	.51	.45
21	.71	.75	23	55	42	31	19	16	2.4	.12	1.1	2.8
22	.85	.75	21	49	41	29	17	16	3.5	.39	9.0	2.8
23	.65	.75	22	43	39	28	16	16	3.2	.15	2.6	2.3
24	.71	.90	22	35	43	28	16	15	5.7	.55	1.1	2.4
25	.61	65	22	35	48	27	15	16	5.9	1.4	.87	2.2
26	.97	70	22	33	75	26	29	16	3.7	1.9	.75	2.0
27	1.0	39	23	28	93	24	49	16	3.0	.34	.62	1.8
28	1.1	37	22	29	84	23	54	15	2.3	.23	.51	2.0
29	1.4	28	22	28	---	22	54	15	3.0	.35	.43	1.9
30	1.6	26	22	26	---	22	49	14	3.7	.75	.39	1.9
31	1.5	---	22	25	---	21	---	12	---	.55	.47	---
TOTAL	55.61	292.04	788	1985	1428	1538	937	650	117.7	75.46	27.17	34.75
MEAN	1.79	9.73	25.4	64.0	51.0	49.6	31.2	21.0	3.92	2.43	.88	1.16
MAX	5.3	70	96	121	119	121	54	44	10	11	9.0	2.8
MIN	.61	.69	10	11	23	21	15	12	1.9	.12	.00	.28
AC-FT	110	579	1560	3940	2830	3050	1860	1290	233	150	54	69

CAL YR 1977 TOTAL 2335.63 MEAN 6.40 MAX 96 MIN .00 AC-FT 4630
WTR YR 1978 TOTAL 7928.73 MEAN 21.7 MAX 121 MIN .00 AC-FT 15730

14036000 WILLOW CREEK NEAR ARLINGTON, OR

LOCATION.--Lat 45°45'12", long 120°00'35", in NE¼SW¼ sec.12, T.3 N., R.22 E., Gilliam County, Hydrologic Unit 17070104, on right bank at bridge on discontinued highway, 3.8 mi (6.1 km) downstream from Eightmile Canyon, 10 mi (16 km) east of Arlington, and at mile 3.7 (6.0 km).

DRAINAGE AREA.--850 mi^2 (2,200 km^2), approximately.

PERIOD OF RECORD.--March to July 1906, August 1960 to current year. Records for March to August 1905 at site just upstream from Eightmile Canyon not equivalent owing to diversions and inflow.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 291.26 ft (88.776 m) National Geodetic Vertical Datum of 1929. Mar. 1 to July 21, 1906, nonrecording gage at site 2.6 mi (4.2 km) upstream at different datum. Aug. 24, 1960, to July 1, 1964, water-stage recorder at site 430 ft (131 m) downstream at same datum.

REMARKS.--Records fair except those below 10 ft^3/s (0.28 m^3/s), which are poor. No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--18 years, 28.6 ft^3/s (0.810 m^3/s), 20,720 acre-ft/yr (25.5 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft^3/s (479 m^3/s) probably occurred Jan. 14, 1974, gage height, 11.18 ft (3.408 m), from floodmark, from rating curve extended above 1,900 ft^3/s (53.8 m^3/s) on basis of slope-area measurement at gage height 11.05 ft (3.368 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft^3/s (11.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Jan. 5	2330	1,220	34.6	6.98	2.128	June 29	2300	*3,460	98.0	*9.42	2.871
Jan. 10	0030	916	25.9	6.28	1.914	July 2	0200	1,020	28.9	6.55	1.996

Minimum, no flow June 27, July 31, Aug. 8, 9, Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.88	.51	22	2.6	49	124	33	112	7.4	3.6	.22	1.4
2	2.6	.51	6.4	2.6	48	110	71	79	.88	122	1.0	.88
3	.88	.51	.74	2.9	48	90	68	63	.17	14	1.0	.22
4	.74	.51	.51	3.2	45	80	60	56	1.2	14	1.0	.00
5	1.0	1.7	.62	198	45	77	59	60	.41	13	.51	2.2
6	.62	3.2	.62	371	46	60	60	56	.27	10	.74	2.2
7	.62	2.0	.51	122	61	47	59	54	.51	4.4	1.0	2.6
8	1.2	1.2	.51	94	135	47	56	47	.27	43	.00	2.6
9	.88	1.0	.51	131	144	85	60	36	.74	22	.00	.51
10	1.7	.88	.62	393	122	174	56	30	1.2	16	.17	.33
11	1.2	.74	.88	169	107	169	45	24	3.2	14	.27	.13
12	.88	.88	1.2	150	99	148	40	19	1.4	12	.62	.51
13	1.7	.88	2.9	179	80	128	36	18	1.0	8.5	.41	1.0
14	2.0	.74	2.2	162	73	110	25	21	.88	3.2	.74	2.0
15	1.4	.74	4.0	209	67	94	22	24	1.0	2.9	1.0	1.7
16	.41	.74	84	215	61	82	24	27	1.2	2.2	2.0	.88
17	.41	.74	38	201	51	64	18	23	.41	1.0	2.0	1.0
18	.41	.74	22	174	48	59	7.9	23	.33	1.4	2.2	2.0
19	.51	.74	14	101	49	52	12	23	.41	1.2	2.2	2.6
20	.22	.62	5.3	84	59	47	17	20	.51	1.0	1.7	2.6
21	.02	.62	2.9	71	61	36	12	19	.51	.74	.62	2.6
22	.41	.74	1.2	68	60	31	22	18	.41	.74	2.0	1.7
23	.41	.62	1.2	60	60	33	22	16	.41	.88	2.0	1.4
24	.41	.74	1.2	47	63	34	19	14	.51	.88	1.2	1.4
25	.51	.88	1.0	41	73	32	13	15	1.0	.74	1.0	1.0
26	1.4	1.2	1.0	49	87	31	21	16	.41	.62	1.2	1.2
27	1.0	76	2.0	42	133	30	66	15	.00	.51	1.2	1.7
28	.51	45	2.6	41	146	28	114	14	.22	.88	1.4	2.2
29	.06	39	5.8	52	---	21	133	14	133	.01	1.0	2.2
30	.33	28	7.4	48	---	24	126	9.6	90	.06	1.0	2.0
31	.51	---	4.0	48	---	32	---	10	---	.00	1.0	---
TOTAL	25.83	212.38	237.82	3531.3	2120	2179	1378.9	975.6	249.86	315.46	32.40	44.76
MEAN	.83	7.08	7.67	114	75.7	70.3	46.0	31.5	8.33	10.2	1.05	1.49
MAX	2.6	76	84	393	146	174	133	112	133	122	2.2	2.6
MIN	.02	.51	.51	2.6	45	21	7.9	9.6	.00	.00	.00	.00
AC-FT	51	421	472	7000	4210	4320	2740	1940	496	626	64	89

CAL YR 1977 TOTAL 690.47 MEAN 1.89 MAX 84 MIN .00 AC-FT 1370
WTR YR 1978 TOTAL 11303.31 MEAN 31.0 MAX 393 MIN .00 AC-FT 22420

14037500 STRAWBERRY CREEK ABOVE SLIDE CREEK, NEAR PRAIRIE CITY, OR

LOCATION.--Lat 44°20'30", long 118°39'20", in SE¼NW¼ sec.20, T.14 S., R.34 E., Grant County, Hydrologic Unit 17070201, on left bank 100 ft (30 m) upstream from Slide Creek, 8.5 mi (13.7 km) south of Prairie City, and at mile 9.0 (14.5 km).

DRAINAGE AREA.--7.00 mi^2 (18.13 km^2).

PERIOD OF RECORD.--October 1930 to current year. Prior to October 1944, published as "above South Fork, near Prairie City."

REVISED RECORDS.--WSP 1488: 1932-33. WSP 1738: Drainage area.

GAGE.--Water-stage recorder and log control. Datum of gage is 4,909.57 ft (1,496.437 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow affected by natural storage in Strawberry Lake. No diversion above station.

AVERAGE DISCHARGE.--48 years, 12.7 ft^3/s (0.360 m^3/s), 24.64 in/yr (626 mm/yr), 9,200 acre-ft/yr (11.3 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 274 ft^3/s (7.76 m^3/s) June 14, 1974, gage height, 2.20 ft (0.671 m), from rating curve extended above 190 ft^3/s (5.38 m^3/s); maximum gage height, 3.23 ft (0.985 m) May 24, 1956 (backwater from logs); minimum discharge, 1.0 ft^3/s (0.028 m^3/s) Mar. 20, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 75 ft^3/s (2.12 m^3/s) June 7, gage height, 1.88 ft (0.573 m); minimum, 1.8 ft^3/s (0.051 m^3/s) Nov. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	2.2	4.4	3.1	3.1	2.8	16	17	37	39	12	4.7
2	3.1	2.4	4.7	2.8	3.1	2.8	16	17	40	40	12	4.4
3	2.8	2.2	4.7	3.1	3.1	2.6	15	17	45	39	12	4.4
4	2.8	2.2	4.7	3.4	3.1	2.8	15	17	55	39	11	4.1
5	2.8	2.2	4.4	3.6	3.1	2.8	14	17	61	36	11	4.1
6	2.8	2.2	4.4	3.5	3.1	2.6	13	17	63	35	10	4.1
7	2.8	2.2	4.7	3.4	3.1	2.8	13	16	70	32	10	4.4
8	2.6	2.0	4.4	3.5	3.1	3.1	12	16	70	31	9.5	4.1
9	2.6	2.2	4.7	3.6	3.1	3.1	12	18	70	30	9.0	4.1
10	2.6	2.2	4.4	3.4	2.8	3.3	12	22	65	30	9.0	4.1
11	2.6	2.2	4.4	3.5	2.8	3.3	12	23	59	29	8.5	4.1
12	2.6	2.2	4.4	3.5	2.7	3.3	11	23	57	28	8.5	4.1
13	2.6	2.2	5.0	3.5	2.7	3.3	11	24	55	26	8.5	4.1
14	2.6	2.2	6.4	3.5	2.8	3.1	11	27	53	23	8.1	4.1
15	2.6	2.2	7.2	3.8	2.8	3.1	11	30	51	22	8.1	4.1
16	2.6	2.2	6.4	3.5	2.8	2.8	11	29	46	21	7.6	4.1
17	2.6	2.0	6.4	3.5	2.8	2.8	11	28	45	20	7.2	4.1
18	2.4	2.0	6.4	3.5	2.6	3.1	10	28	43	18	6.8	4.1
19	2.4	2.1	6.0	3.5	2.6	3.5	10	28	43	17	6.8	4.1
20	2.4	2.0	6.0	3.5	2.6	3.8	10	29	46	17	6.4	4.1
21	2.4	1.9	6.0	3.3	2.6	4.1	9.5	32	48	17	6.4	4.1
22	2.4	2.1	5.6	3.3	2.6	4.7	9.5	36	50	16	6.4	4.1
23	2.4	2.0	5.3	3.3	2.6	5.3	9.0	37	50	15	6.0	3.8
24	2.2	2.2	5.0	3.3	2.8	5.6	9.0	39	50	15	5.6	3.8
25	2.4	3.3	4.7	3.3	2.8	5.6	9.5	40	48	15	5.6	3.8
26	2.2	4.4	4.7	3.3	2.8	6.0	12	39	43	15	5.3	3.8
27	2.2	4.1	4.7	3.1	2.8	7.2	16	37	39	14	5.3	3.8
28	2.2	4.1	4.4	3.1	2.8	8.5	17	36	37	14	5.0	3.8
29	2.4	4.1	4.4	3.1	---	10	17	36	37	13	5.0	3.5
30	2.2	4.1	4.4	3.1	---	12	18	35	39	13	4.7	3.5
31	2.2	---	4.4	3.1	---	14	---	35	---	13	4.7	---
TOTAL	78.6	75.6	157.7	104.0	79.7	143.8	372.5	845	1515	732	242.0	121.5
MEAN	2.54	2.52	5.09	3.35	2.85	4.64	12.4	27.3	50.5	23.6	7.81	4.05
MAX	3.1	4.4	7.2	3.8	3.1	14	18	40	70	40	12	4.7
MIN	2.2	1.9	4.4	2.8	2.6	2.6	9.0	16	37	13	4.7	3.5
CFSM	.36	.36	.73	.48	.41	.66	1.77	3.90	7.21	3.37	1.12	.58
IN.	.42	.40	.84	.55	.42	.76	1.98	4.49	8.05	3.89	1.29	.65
AC-FT	156	150	313	206	158	285	739	1680	3010	1450	480	241

CAL YR 1977 TOTAL 1820.2 MEAN 4.99 MAX 30 MIN 1.5 CFSM .71 IN 9.67 AC-FT 3610
WTR YR 1978 TOTAL 4467.4 MEAN 12.2 MAX 70 MIN 1.9 CFSM 1.74 IN 23.74 AC-FT 8860

14038530 JOHN DAY RIVER NEAR JOHN DAY, OR

LOCATION.--Lat 44°25'10", long 118°54'10", in SE¼SE¼ sec.19, T.13 S., R.32 E., Grant County, Hydrologic Unit 17070201, on left bank 800 ft (244 m) downstream from Dog Creek, 2.5 mi (4.0 km) east of John Day, and at mile 251.0 (403.9 km).

DRAINAGE AREA.--386 mi^2 (1,000 km^2).

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,130.56 ft (954.195 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some regulation from irrigation ditches upstream. Many diversions above station for irrigation.

AVERAGE DISCHARGE.--10 years, 192 ft^3/s (5.437 m^3/s), 139,100 acre-ft/yr (172 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,830 ft^3/s (165 m^3/s) June 9, 1969, gage height, 10.80 ft (3.292 m), from floodmark; minimum, 3.5 ft^3/s (0.099 m^3/s) Aug. 26-28, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft^3/s (22.7 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 15	0730	*1,340	37.9	*6.00	1.829
Apr. 1	1130	988	28.0	5.48	1.670

Minimum, 11 ft^3/s (0.31 m^3/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	84	131	82	142	166	745	450	150	234	46	41
2	80	87	137	82	141	157	595	410	144	268	36	39
3	80	83	171	112	310	161	475	379	171	250	26	35
4	80	80	142	161	230	165	408	364	220	205	23	32
5	80	80	131	198	195	178	384	347	269	168	27	29
6	78	80	130	178	202	184	419	312	310	163	24	36
7	81	80	124	155	213	173	372	283	322	141	18	46
8	78	79	115	158	235	205	320	264	324	140	18	58
9	78	78	111	183	205	295	294	284	323	140	18	60
10	78	79	112	227	187	262	282	380	453	119	17	61
11	73	80	115	224	155	251	279	390	380	109	16	62
12	72	78	120	244	141	251	274	381	288	112	12	61
13	74	78	205	258	141	231	268	366	288	107	16	67
14	72	81	386	304	140	217	264	385	271	93	18	70
15	71	84	1010	269	130	201	257	496	254	93	23	75
16	70	82	405	244	122	195	275	440	220	89	42	78
17	72	80	313	343	124	192	252	395	186	91	43	77
18	72	74	255	347	122	208	232	358	186	86	43	89
19	71	63	205	255	130	227	218	329	205	80	44	97
20	71	59	161	227	139	251	222	302	187	81	45	89
21	72	68	169	211	154	262	214	332	200	79	40	82
22	70	93	166	205	156	273	206	367	201	78	38	84
23	72	95	169	183	166	296	207	338	187	76	50	82
24	71	113	195	155	184	292	201	297	199	73	60	78
25	81	234	198	163	202	269	214	266	211	64	54	73
26	87	272	180	161	192	277	333	208	182	61	53	73
27	82	178	164	147	190	304	488	189	147	61	52	73
28	82	157	155	152	172	325	560	178	158	53	43	72
29	87	139	155	166	---	352	541	178	161	55	43	73
30	88	132	169	147	---	385	502	155	159	53	45	73
31	87	---	145	146	---	405	---	162	---	52	43	---
TOTAL	2390	3050	6344	6087	4820	7610	10300	9985	6956	3474	1076	1965
MEAN	77.1	102	205	196	172	245	343	322	232	112	34.7	65.5
MAX	88	272	1010	347	310	405	745	496	453	268	60	97
MIN	70	59	111	82	122	157	201	155	144	52	12	29
AC-FT	4740	6050	12580	12070	9560	15090	20430	19810	13800	6890	2130	3900

CAL YR 1977 TOTAL 30726.1 MEAN 84.2 MAX 1010 MIN 4.5 AC-FT 60950
WTR YR 1978 TOTAL 64057.0 MEAN 175 MAX 1010 MIN 12 AC-FT 127100

14040500 JOHN DAY RIVER AT PICTURE GORGE, NEAR DAYVILLE, OR

LOCATION.--Lat 44°31'15", long 119°37'30", in SW¼ sec.17, T.12 S., R.26 E., Grant County, Hydrologic Unit 17070201, on right bank 0.7 mi (1.1 km) upstream from Rock Creek, 5.5 mi (8.8 km) northwest of Dayville, and at mile 205.1 (330.0 km).

DRAINAGE AREA.--1,680 mi^2 (4,350 km^2), approximately.

PERIOD OF RECORD.--April 1926 to current year. Monthly discharge only April 1926, published in WSP 1318.

REVISED RECORDS.--WSP 1218: 1950. WSP 1348: Drainage area. WSP 1448: 1926, 1928, 1932(M), 1936.

GAGE.--Water-stage recorder. Datum of gage is 2,229.84 ft (679.655 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 11, 1926, nonrecording gage and Oct. 11, 1926, to Sept. 30, 1930, water-stage recorder at same site at datum 2.50 ft (0.762 m) higher. Oct. 1, 1930, to Aug. 28, 1970, at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good. No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--52 years, 465 ft^3/s (13.17 m^3/s), 336,900 acre-ft/yr (415 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,170 ft^3/s (231 m^3/s) Dec. 22, 1964, gage height, 14.97 ft (4.563 m); minimum, 1.0 ft^3/s (0.028 m^3/s) for several days in August and September 1930, Aug. 8, 9, 1936, Sept. 9, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft^3/s (51.0 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 15	1030	*3,590	102	*10.08	3.072	Apr. 1	1330	3,570	101	10.06	3.066
Mar. 9	0730	2,270	64.3	8.47	2.582	Apr. 27	1930	2,080	58.9	8.20	2.499

Minimum, 24 ft^3/s (0.68 m^3/s) Aug. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	146	306	279	444	764	2730	1430	440	303	53	60
2	106	141	295	254	433	711	2780	1320	406	396	50	62
3	101	141	346	355	777	703	2260	1230	389	512	49	59
4	102	141	364	383	1020	707	1930	1170	413	468	46	56
5	102	145	328	423	800	907	1710	1150	440	416	37	54
6	111	145	303	458	879	1040	1740	1060	486	370	33	53
7	116	143	295	399	875	902	1680	977	490	331	32	59
8	118	141	277	377	944	1250	1470	902	486	370	28	80
9	116	140	257	479	852	2030	1340	866	486	325	26	101
10	114	143	252	830	777	1680	1270	977	569	279	28	111
11	112	141	249	764	715	1470	1230	1030	665	245	28	119
12	111	140	259	678	615	1380	1180	1030	554	226	26	134
13	107	140	271	690	627	1220	1150	977	512	207	29	135
14	106	140	475	866	586	1120	1100	930	512	200	33	137
15	114	145	2730	1060	573	1010	1060	1070	482	180	37	146
16	112	148	1400	1050	508	963	1060	1100	454	170	38	143
17	112	148	935	1030	519	953	1050	997	406	150	39	143
18	106	148	764	1130	508	1030	982	897	367	130	41	153
19	102	145	594	953	515	1150	925	848	393	120	41	169
20	106	135	454	879	558	1270	884	791	367	110	41	165
21	104	127	458	800	586	1330	884	782	358	100	41	157
22	112	150	451	746	627	1370	848	839	377	96	94	153
23	112	178	444	669	698	1500	852	817	358	92	98	145
24	111	186	461	558	782	1540	809	777	358	86	94	135
25	123	284	501	550	920	1370	804	728	409	80	89	126
26	138	640	482	550	907	1330	1390	669	389	77	84	116
27	140	486	433	501	888	1390	1790	619	340	77	83	114
28	138	419	406	482	809	1450	1810	573	308	74	76	114
29	140	349	396	490	---	1480	1650	534	320	70	67	114
30	145	325	433	475	---	1510	1520	512	320	63	62	118
31	146	---	409	454	---	1530	---	479	---	57	64	---
TOTAL	3599	6000	16028	19612	19742	38060	41888	28081	12854	6380	1587	3431
MEAN	116	200	517	633	705	1228	1396	906	428	206	51.2	114
MAX	146	640	2730	1130	1020	2030	2780	1430	665	512	98	169
MIN	101	127	249	254	433	703	804	479	308	57	26	53
AC-FT	7140	11900	31790	38900	39160	75490	83080	55700	25500	12650	3150	6810

CAL YR 1977 TOTAL 66240.4 MEAN 181 MAX 2730 MIN 4.9 AC-FT 131400
WTR YR 1978 TOTAL 197262.0 MEAN 540 MAX 2780 MIN 26 AC-FT 391300

14042500 CAMAS CREEK NEAR UKIAH, OR

LOCATION.--Lat 45°09'25", long 118°49'10", in SE¼SE¼ sec.3, T.5 S., R.32 E., Umatilla County, Hydrologic Unit 17070202, on right bank 1.2 mi (1.9 km) upstream from Cable Creek, 5.8 mi (9.3 km) east of Ukiah, and at mile 18.7 (30.1 km).

DRAINAGE AREA.--121 mi² (313 km²).

PERIOD OF RECORD.--May 1914 to September 1917, November 1919 to July 1920, November 1920 to June 1924, March 1932 to June 1940 (fragmentary), November 1940 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as "above Cable Creek, near Ukiah" 1914-17, 1919-24.

REVISED RECORDS.--WSP 1448: 1916, 1920, 1922(M), 1924.

GAGE.--Water-stage recorder. Datum of gage is 3,588.61 ft (1,093.808 m) National Geodetic Vertical Datum of 1929 (levels by Highway Department). May 1, 1914, to June 30, 1924, nonrecording gage and Mar. 1, 1932, to July 2, 1940, water-stage recorder at site 1.2 mi (1.9 km) downstream at different datum.

REMARKS.--Records good. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--42 years (water years 1915-17, 1922-23, 1942-78), 95.0 ft³/s (2.690 m³/s), 68,830 acre-ft/yr (84.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,840 ft³/s (109 m³/s) Jan. 30, 1965, gage height, 5.21 ft (1.588 m); maximum gage height, 5.24 ft (1.597 m) Feb. 3, 1963 (ice jam); minimum discharge recorded, 1.0 ft³/s (0.028 m³/s) Aug. 9, 1932, June 24 to July 2, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 550 ft³/s (15.6 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 2	2300	565	16.0	2.41	0.735	Apr. 28	0100	*629	17.8	*2.50	0.762

Minimum, 4.3 ft³/s (0.12 m³/s) Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	14	139	42	60	161	454	297	51	27	6.8	6.8
2	11	16	276	30	57	139	432	248	47	57	6.8	6.4
3	10	15	421	47	70	126	356	209	44	44	6.4	6.0
4	9.5	14	264	54	81	124	310	185	44	41	6.4	6.0
5	9.5	14	185	62	105	139	280	164	44	38	6.0	6.4
6	9.0	14	155	58	167	150	268	144	41	35	5.6	9.5
7	12	14	136	52	176	155	260	126	39	39	6.0	13
8	12	13	107	66	170	230	233	112	35	48	5.6	15
9	11	13	92	75	153	421	209	110	32	41	5.0	11
10	10	13	86	84	129	351	192	136	38	38	5.0	11
11	9.0	12	90	73	114	289	185	136	43	35	5.0	11
12	9.0	12	88	73	92	241	173	131	32	31	5.3	10
13	9.0	14	241	82	94	202	164	124	32	28	7.2	9.0
14	8.5	15	421	112	81	176	153	124	32	25	8.1	9.0
15	8.5	17	460	126	75	153	144	167	30	22	9.5	8.5
16	8.5	18	328	147	68	144	161	164	26	21	13	8.1
17	8.5	18	256	164	62	161	158	147	24	19	11	8.1
18	8.5	12	202	153	60	212	170	136	21	18	9.0	9.0
19	8.1	9.0	155	136	73	252	170	124	21	16	7.6	9.5
20	8.1	6.0	103	131	81	264	173	114	20	15	7.6	8.5
21	8.1	7.0	80	129	92	293	173	110	21	14	8.1	8.1
22	8.1	9.0	80	119	114	319	170	112	21	13	9.0	7.6
23	8.1	20	99	103	136	346	173	101	19	12	12	7.2
24	8.1	66	103	88	170	323	167	92	21	11	9.0	7.2
25	11	164	107	101	237	310	164	84	23	11	8.5	6.8
26	13	314	112	82	241	319	219	73	20	10	8.1	6.4
27	12	202	99	73	219	346	406	70	17	9.0	7.6	6.4
28	11	182	86	75	185	337	584	68	16	9.0	6.8	6.4
29	12	192	88	73	---	328	465	60	20	8.1	6.4	6.4
30	12	170	81	66	---	319	370	58	18	7.6	6.8	6.4
31	13	---	62	65	---	301	---	55	---	7.2	6.8	---
TOTAL	308.1	1599.0	5202	2741	3362	7651	7536	3981	892	749.9	232.0	250.7
MEAN	9.94	53.3	168	88.4	120	247	251	128	29.7	24.2	7.48	8.36
MAX	13	314	460	164	241	421	584	297	51	57	13	15
MIN	8.1	6.0	62	30	57	124	144	55	16	7.2	5.0	6.0
AC-FT	611	3170	10320	5440	6670	15180	14950	7900	1770	1490	460	497

CAL YR 1977 TOTAL 21611.0 MEAN 59.2 MAX 676 MIN 3.1 AC-FT 42870
WTR YR 1978 TOTAL 34504.7 MEAN 94.5 MAX 584 MIN 5.0 AC-FT 68440

14044000 MIDDLE FORK JOHN DAY RIVER AT RITTER, OR

LOCATION.--Lat 44°53'20", long 119°08'25", in SW¼NW¼ sec.8, T.8 S., R.30 E., Grant County, Hydrologic Unit 17070203, on left bank 0.2 mi (0.3 km) south of Ritter, 0.8 mi (1.3 km) downstream from Twelvemile Creek, and at mile 14.9 (24.0 km).

DRAINAGE AREA.--515 mi² (1,334 km²).

PERIOD OF RECORD.--October 1929 to current year.

REVISED RECORDS.--WSP 739: 1931. WSP 1218: 1950. WSP 1448: 1930-32, 1937, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,544.56 ft (775.582 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--49 years, 242 ft³/s (6.853 m³/s), 175,300 acre-ft/yr (216 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,730 ft³/s (134 m³/s) Jan. 30, 1965, gage height, 8.39 ft (2.557 m), from rating curve extended above 2,200 ft³/s (62.3 m³/s); maximum gage height, 9.13 ft (2.783 m) Feb. 1, 1963, ice jam; minimum discharge, 0.90 ft³/s (0.025 m³/s) Aug. 19, 20, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 15	0830	1,470	41.6	5.38	1.640	Apr. 27	2330	1,020	28.9	4.88	1.487
Apr. 1	1030	*2,560	72.5	*6.42	1.957						

Minimum discharge, 9.1 ft³/s (0.26 m³/s) Nov. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	56	146	84	162	356	1980	743	363	143	34	35
2	38	56	150	73	154	318	1700	697	371	203	33	34
3	36	59	345	125	182	312	1290	669	394	180	32	32
4	36	51	270	148	211	299	1050	632	426	171	31	31
5	35	49	206	158	234	367	929	596	443	152	30	30
6	34	51	171	169	338	447	944	537	464	139	32	34
7	36	48	158	160	468	422	915	504	451	124	29	48
8	40	45	134	169	500	586	797	490	430	131	27	59
9	39	42	112	171	382	887	731	518	422	123	27	59
10	36	42	128	208	318	803	686	731	414	107	26	55
11	34	41	116	201	284	692	680	720	390	101	22	64
12	34	41	123	226	226	627	642	703	338	97	23	72
13	34	43	180	208	242	532	611	648	318	91	28	58
14	33	44	321	216	216	482	581	653	302	86	38	52
15	33	49	1150	247	211	414	551	725	273	79	40	51
16	32	54	664	281	173	406	561	697	253	72	52	47
17	31	50	451	331	180	414	537	627	234	72	52	47
18	31	44	360	315	175	486	490	586	223	68	44	57
19	31	37	281	273	199	581	455	566	226	64	40	64
20	31	23	178	253	236	692	451	566	208	60	37	56
21	31	11	184	253	258	725	451	586	206	56	37	52
22	32	24	184	250	293	766	430	616	211	54	41	50
23	32	52	184	226	315	815	418	566	191	52	80	48
24	34	76	228	165	342	790	398	518	182	50	61	45
25	40	175	275	187	434	714	402	477	194	47	49	43
26	63	342	264	211	464	737	606	434	173	45	44	40
27	54	236	213	167	460	803	867	406	158	45	40	38
28	51	184	189	180	382	860	965	406	146	44	38	39
29	50	154	180	201	---	894	874	414	146	40	34	39
30	52	167	173	167	---	936	803	390	145	37	34	39
31	57	---	150	169	---	951	---	382	---	35	35	---
TOTAL	1193	2346	7868	6192	8039	19114	22795	17803	8695	2768	1170	1418
MEAN	38.5	78.2	254	200	287	617	760	574	290	89.3	37.7	47.3
MAX	63	342	1150	331	500	951	1980	743	464	203	80	72
MIN	31	11	112	73	154	299	398	382	145	35	22	30
AC-FT	2370	4650	15610	12280	15950	37910	45210	35310	17250	5490	2320	2810

CAL YR 1977 TOTAL 38253 MEAN 105 MAX 1150 MIN 11 AC-FT 75870
WTR YR 1978 TOTAL 99401 MEAN 272 MAX 1980 MIN 11 AC-FT 197200

14046000 NORTH FORK JOHN DAY RIVER AT MONUMENT, OR

LOCATION.--Lat 44°48'50", long 119°25'50", in SE¼ sec.2, T.9 S., R.27 E., Grant County, Hydrologic Unit 17070202, on right bank just downstream from entrance to canyon, 0.7 mi (1.1 km) downstream from Cottonwood Creek, 0.8 mi (1.3 km) west of Monument, and at mile 15.3 (24.6 km).

DRAINAGE AREA.—2,520 mi^2 (6,530 km^2), approximately.

PERIOD OF RECORD.—March 1925 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.—WSP 754: 1932(M). WSP 1448: 1927, 1931(M), 1949.

GAGE.—Water-stage recorder. Datum of gage is 1,959.64 ft (597.298 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 24, 1925, nonrecording gage and Nov. 24, 1925, to Oct. 16, 1928, water-stage recorder at datum 1.10 ft (0.335 m) higher. Oct. 17, 1928, to Sept. 30, 1930, water-stage recorder at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records excellent except those for period of no gage-height record, Oct. 11 to Nov. 22, which are fair. Very slight regulation by small reservoirs upstream. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.—53 years, 1,220 ft^3/s (34.55 m^3/s), 883,900 acre-ft/yr (1.09 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 33,400 ft^3/s (946 m^3/s) Jan. 30, 1965, gage height, 18.45 ft (5.624 m), from rating curve extended above 17,000 ft^3/s (481 m^3/s); minimum, 6 ft^3/s (0.17 m^3/s) sometime during period Nov. 2-13, 1936 (result of freezeup); minimum daily, 17 ft^3/s (0.48 m^3/s) Dec. 12, 1932.

EXTREMES FOR CURRENT YEAR.—Peak discharges above base of 5,300 ft^3/s (150 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	(m^3/s)	Gage height (ft)	(m)
Dec. 15	1330	8,310	235	9.01	2.746
Mar. 9	1230	6,010	170	7.91	2.411
Apr. 1	1600	*13,000	368	*10.98	3.347
Apr. 28	1000	5,720	162	7.76	2.365

Minimum daily discharge, 45 ft^3/s (1.27 m^3/s) Nov. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207	230	939	725	939	1870	9450	3970	1570	882	177	153
2	174	230	955	588	914	1600	9000	3650	1560	1060	171	148
3	156	240	2120	906	1030	1510	6720	3400	1600	1130	165	137
4	145	213	1860	955	1280	1510	5520	3130	1720	981	159	129
5	140	200	1360	998	1210	1740	4830	2960	1810	866	153	127
6	134	210	1130	1070	1650	2050	4460	2660	1910	790	145	142
7	137	200	1050	964	2200	1840	4370	2410	1900	768	151	159
8	142	190	906	947	2800	2530	3840	2260	1800	898	137	225
9	159	175	746	1530	2140	5040	3430	2260	1740	812	129	307
10	153	170	746	2290	1800	4330	3190	3070	1690	698	122	262
11	140	170	739	1910	1550	3620	3170	3300	1690	638	117	249
12	135	170	775	1680	1310	3240	3020	3200	1470	594	117	275
13	132	180	1240	1610	1240	2790	2870	2910	1360	552	122	270
14	135	190	4320	1800	1190	2460	2710	2940	1340	514	142	241
15	135	200	6840	2260	1140	2070	2610	3330	1230	471	197	221
16	130	220	4250	2490	998	1960	2590	3420	1130	437	207	207
17	129	200	2920	2470	964	1950	2590	2950	1030	420	270	197
18	128	170	2260	2230	947	2230	2370	2670	989	402	237	207
19	128	150	1780	1990	1070	2590	2220	2530	998	374	197	237
20	129	100	1210	1840	1250	3020	2170	2470	964	347	177	237
21	132	45	1080	1740	1290	3260	2170	2510	947	322	171	218
22	130	73	1200	1620	1400	3490	2060	2750	1010	307	193	211
23	132	82	1140	1420	1560	3880	2030	2570	964	288	229	197
24	140	297	1200	1140	1680	4100	1910	2320	914	270	322	190
25	160	527	1420	1040	2380	3700	1930	2130	914	253	241	184
26	260	1510	1470	1170	2470	3720	2650	1930	882	241	207	174
27	225	1490	1280	1010	2540	4050	4080	1780	783	233	190	159
28	210	1190	1080	972	2120	4330	5410	1760	732	221	177	156
29	205	1050	1070	1120	---	4500	4980	1780	754	211	162	153
30	210	1140	1090	1040	---	4800	4450	1710	768	197	156	153
31	230	---	989	947	---	4930	---	1630	---	187	153	---
TOTAL	4902	11212	51165	44472	43062	94710	112800	82360	38169	16364	5493	5925
MEAN	158	374	1650	1435	1538	3055	3760	2657	1272	528	177	198
MAX	260	1510	6840	2490	2800	5040	9450	3970	1910	1130	322	307
MIN	128	45	739	588	914	1510	1910	1630	732	187	117	127
AC-FT	9720	22240	101500	88210	85410	187900	223700	163400	75710	32460	10900	11750

CAL YR 1977 TOTAL 212447 MEAN 582 MAX 6840 MIN 45 AC-FT 421400
WTR YR 1978 TOTAL 510634 MEAN 1399 MAX 9450 MIN 45 AC-FT 1013000

14046500 JOHN DAY RIVER AT SERVICE CREEK, OR

LOCATION.--Lat 44°47'38", long 120°00'20", in NW¼NE¼ sec.18, T.9 S., R.23 E., Wheeler County, Hydrologic Unit 17070204, on left bank 0.2 mi (0.3 km) downstream from bridge on State Highway 207, 0.8 mi (1.3 km) downstream from Service Creek, 0.5 mi (0.8 km) southwest of town of Service Creek, and at mile 156.7 (252.1 km).

DRAINAGE AREA.--5,090 mi^2 (13,200 km^2), approximately.

PERIOD OF RECORD.--March 1925 to September 1926, October 1929 to current year. Monthly discharge only March 1925 to September 1926, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,632.42 ft (497.562 m) National Geodetic Vertical Datum of 1929. See WSP 1738 for history of changes prior to Feb. 24, 1957.

REMARKS.--Records excellent. Very slight regulation by several small reservoirs above station. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--50 years, 1,821 ft^3/s (51.57 m^3/s), 1,319,000 acre-ft/yr (1.63 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,200 ft^3/s (1,140 m^3/s) Dec. 23, 1964, gage height, 17.85 ft (5.441 m), from rating curve extended above 14,000 ft^3/s (396 m^3/s) on basis of slope-area measurement of peak flow; minimum, 6.0 ft^3/s (0.17 m^3/s) Aug. 23, 24, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,300 ft^3/s (207 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 15	2000	11,700	331	9.88	3.011	Apr. 1	2200	*16,600	470	*11.56	3.523
Mar. 9	1930	8,510	241	8.52	2.597	Apr. 28	1500	8,200	232	8.38	2.554

Minimum, 109 ft^3/s (3.09 m^3/s) Aug. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	378	410	1460	1320	1630	2980	10300	6020	2250	1500	232	228
2	359	403	1310	790	1590	2710	13500	5460	2160	1420	220	220
3	319	384	1910	920	1630	2480	9940	5100	2140	2780	213	209
4	298	403	2700	1430	2500	2460	8140	4780	2210	1790	188	198
5	284	403	2080	1550	2330	2620	7140	4590	2330	1590	188	188
6	284	384	1670	1740	2560	3280	6580	4190	2450	1410	168	188
7	289	378	1500	1630	3220	3080	6500	3810	2520	1380	147	198
8	293	378	1400	1500	4250	3360	5890	3500	2430	1430	150	228
9	298	365	1180	1880	3530	6620	5250	3380	2350	1430	138	325
10	314	342	1050	3170	3100	6890	4850	3860	2330	1210	119	423
11	308	330	1090	3300	2650	5700	4710	4690	2480	1060	111	403
12	293	336	1070	2730	2400	5190	4600	4590	2310	967	111	410
13	284	330	1190	2650	2100	4620	4350	4210	2090	875	135	444
14	279	336	3700	2760	2140	4080	4160	4120	2020	790	144	437
15	275	342	8640	3630	1990	3580	3950	4380	1910	718	144	410
16	275	353	7480	4210	1900	3230	3900	5010	1770	659	217	403
17	270	372	4550	3970	1680	3170	4010	4440	1610	621	232	390
18	266	384	3580	3880	1710	3380	3670	3950	1480	595	284	390
19	257	365	2840	3460	1700	3880	3430	3690	1460	577	244	410
20	249	293	2200	3220	2020	4440	3280	3530	1460	535	213	451
21	253	236	1650	2950	2140	4890	3300	3510	1400	496	198	430
22	249	198	1840	2780	2240	5120	3170	3690	1430	466	330	417
23	257	249	1780	2520	2430	5570	3100	3720	1520	430	342	403
24	253	359	1790	2200	2620	6100	2980	3430	1430	410	372	384
25	253	649	2060	1840	3230	5590	2890	3170	1430	378	417	359
26	275	1420	2180	1940	3720	5380	4270	2900	1450	348	359	336
27	314	2460	2060	1930	3790	5680	6340	2670	1310	336	314	308
28	417	1850	1770	1650	3430	6100	7800	2560	1170	314	289	293
29	378	1610	1640	1790	---	6340	7420	2520	1130	293	261	289
30	378	1560	1710	1880	---	6620	6660	2480	1270	279	240	284
31	397	---	1670	1640	---	6890	---	2350	---	253	232	---
TOTAL	9296	17882	72750	72860	70230	142030	166080	120300	55300	27340	6952	10056
MEAN	300	596	2347	2350	2508	4582	5536	3881	1843	882	224	335
MAX	417	2460	8640	4210	4250	6890	13500	6020	2520	2780	417	451
MIN	249	198	1050	790	1590	2460	2890	2350	1130	253	111	188
AC-FT	18440	35470	144300	144500	139300	281700	329400	238600	109700	54230	13790	19950

CAL YR 1977 TOTAL 292299 MEAN 801 MAX 8640 MIN 19 AC-FT 579800
WTR YR 1978 TOTAL 771076 MEAN 2113 MAX 13500 MIN 111 AC-FT 1529000

14047390 ROCK CREEK ABOVE WHYTE PARK, NEAR CONDON, OR

LOCATION.--Lat 45°15'53", long 120°01'15", in NE¼SW¼ sec.36, T.3 S., R.22 E., Gilliam County, Hydrologic Unit 17070204, on left bank 0.2 mi (0.3 km) upstream from Whyte Park, 8.0 mi (12.9 km) northeast of Condon, and at mile 40.8 (65.6 km).

DRAINAGE AREA.--297 mi^2 (769 km^2).

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,714.50 ft (522.580 m) National Geodetic Vertical Datum of 1929 (Soil Conservation Service temporary bench mark).

REMARKS.--Records good. No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 568 ft^3/s (16.1 m^3/s) Feb. 8, 1978, gage height, 6.53 ft (1.990 m); minimum, 0.08 ft^3/s (0.002 m^3/s) Aug. 17, 19, 20, 22, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 220 ft^3/s (6.23 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 15	1330	439	12.4	6.29	1.917	Feb. 8	0030	*568	16.1	*6.53	1.990
Jan. 5	0630	251	7.11	5.83	1.777	Mar. 9	1530	349	9.88	6.09	1.856
Jan. 16	1500	402	11.4	6.21	1.893						

Minimum, 0.18 ft^3/s (0.005 m^3/s) Oct. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.57	36	15	69	128	81	61	12	3.6	.71	1.6
2	.18	.63	29	17	69	109	88	53	9.8	5.5	.71	1.4
3	.18	.63	41	29	70	93	72	46	8.6	9.8	.63	1.3
4	.18	.63	34	86	78	93	65	42	7.6	15	.57	1.3
5	.20	.63	27	171	93	90	63	42	6.9	12	.45	1.3
6	.20	.71	23	86	161	103	62	39	6.1	8.6	.45	1.6
7	.21	.71	19	69	268	109	70	34	5.3	6.9	.40	1.6
8	.21	.63	18	70	370	154	63	28	4.6	15	.36	1.8
9	.21	.63	15	126	251	295	54	26	4.1	17	.36	1.8
10	.21	.71	14	185	188	230	48	28	4.4	12	.33	1.7
11	.27	.71	14	149	144	188	43	28	4.8	9.0	.33	1.8
12	.33	.71	13	147	111	166	39	26	5.0	7.6	.40	1.8
13	.36	.89	34	149	107	149	37	24	5.5	6.3	.71	1.8
14	.36	.89	166	179	93	128	35	24	6.6	5.0	.79	2.1
15	.40	.89	310	349	92	113	33	40	6.1	4.1	.99	2.3
16	.40	.99	164	362	73	107	36	42	5.5	3.8	1.3	2.3
17	.40	.99	99	310	77	101	41	32	5.0	3.8	.99	2.4
18	.45	.80	75	230	72	101	38	27	4.1	3.5	.79	2.5
19	.51	.72	57	205	92	95	33	22	3.8	3.2	.71	2.7
20	.45	.66	42	191	128	92	30	19	3.3	2.8	.99	2.7
21	.51	.80	35	164	126	85	28	17	3.0	2.5	1.2	2.7
22	.51	1.2	37	142	119	81	28	18	2.8	2.1	1.4	2.8
23	.57	2.9	36	115	126	81	31	19	2.9	1.8	1.6	2.8
24	.51	3.3	35	92	126	99	30	18	3.8	1.7	1.3	2.8
25	.51	19	34	97	151	83	27	19	4.1	1.4	1.4	2.8
26	.57	73	32	90	164	73	95	18	4.1	1.3	1.3	2.7
27	.57	54	29	77	179	66	171	18	3.6	1.4	1.2	2.5
28	.57	45	29	83	147	61	115	17	3.2	1.2	1.1	2.4
29	.57	39	30	83	---	55	83	15	13	1.1	1.1	2.4
30	.57	41	31	80	---	53	67	14	4.8	.99	1.3	2.4
31	.57	---	32	72	---	53	---	13	---	.79	1.6	---
TOTAL	11.92	293.93	1590	4220	3744	3434	1706	869	164.4	170.78	27.47	64.1
MEAN	.38	9.80	51.3	136	134	111	56.9	28.0	5.48	5.51	.89	2.14
MAX	.57	73	310	362	370	295	171	61	13	17	1.6	2.8
MIN	.18	.57	13	15	69	53	27	13	2.8	.79	.33	1.3
AC-FT	24	583	3150	8370	7430	6810	3380	1720	326	339	54	127

CAL YR 1977 TOTAL 3784.23 MEAN 10.4 MAX 310 MIN .16 AC-FT 7510
WTR YR 1978 TOTAL 16295.60 MEAN 44.6 MAX 370 MIN .18 AC-FT 32320

14048000 JOHN DAY RIVER AT MCDONALD FERRY, OR
(National stream-quality accounting network station)

LOCATION.--Lat 45°35'16", long 120°24'30", in NE¼NW¼ sec.11, T.1 N., R.19 E., Sherman County, Hydrologic Unit 17070204, on left bank at McDonald Ferry, 0.8 mi (1.3 km) downstream from Rock Creek, 10 mi (16 km) east of Klondike, and at mile 20.9 (33.6 km).

DRAINAGE AREA.--7,580 mi^2 (19,600 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1904 to current year. Prior to Oct. 1, 1930, published as "at McDonald."

REVISED RECORDS.--WSP 1094: 1894(M), 1932(M). WSP 1448: 1908-9, 1912, 1916, 1920(M), 1922, 1932.

GAGE.--Water-stage recorder. Datum of gage is 392.27 ft (119.564 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 30, 1930, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records excellent. No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--73 years (water years 1906-78), 2,002 ft^3/s (56.70 m^3/s), 1,450,000 acre-ft/yr (1.79 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,800 ft^3/s (1,210 m^3/s) Dec. 24, 1964, gage height, 13.59 ft (4.142 m), from floodmark, from rating curve extended above 11,000 ft^3/s (312 m^3/s) on basis of slope-area measurement of peak flow; no flow for part of Sept. 2, 1966, Aug. 15 to Sept. 16, 1973, Aug. 13, 14, 19-25, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1894 reached a stage of 12.8 ft (3.90 m), from floodmarks, discharge, 39,100 ft^3/s (1,110 m^3/s), from rating curve extended above 22,000 ft^3/s (623 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,900 ft^3/s (195 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 16	1630	12,100	343	7.82	2.384	Apr. 2	2000	*17,400	493	*9.19	2.801
Mar. 10	1730	8,560	242	6.72	2.048	Apr. 29	1630	8,480	240	6.69	2.039

Minimum, 98 ft^3/s (2.78 m^3/s) Aug. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	311	360	1500	1810	1990	3820	6670	7120	2540	1510	288	307
2	306	373	1560	1580	1870	3340	11500	6470	2420	2010	273	287
3	306	379	1380	1190	1870	3060	13600	5860	2310	2050	248	274
4	360	392	1320	816	1860	2790	10200	5430	2230	2530	238	253
5	335	392	2560	1280	2400	2730	8400	5110	2220	2010	217	245
6	306	386	2210	2370	2710	2770	7430	4850	2300	1760	204	250
7	300	405	1790	1950	2840	3410	6840	4600	2420	1560	184	240
8	294	386	1540	1910	3780	3460	6700	4230	2540	1480	173	230
9	288	379	1440	2080	4670	3560	6120	3860	2560	1680	164	230
10	288	379	1330	2310	4170	6910	5470	3690	2480	1520	148	230
11	288	373	1200	3350	3640	7130	5020	3770	2440	1370	138	230
12	288	366	1100	3870	3150	5980	4850	4770	2450	1190	129	342
13	300	354	1260	3380	2850	5410	4770	4710	2500	1060	121	431
14	294	341	1430	3240	2480	4840	4520	4400	2250	969	110	432
15	288	347	3560	3760	2450	4340	4340	4320	2090	886	100	434
16	277	341	9220	4530	2310	3970	4180	4470	2030	806	138	444
17	277	341	7620	5360	2210	3610	4060	5120	1900	749	154	446
18	277	354	4900	4880	1990	3460	4150	4740	2060	700	154	444
19	277	373	3910	5000	1950	3450	3870	4290	1560	643	154	439
20	266	386	3160	4530	1960	3760	3630	3970	1450	606	158	439
21	261	366	2580	4070	2100	4210	3450	3780	1430	573	256	439
22	261	335	1960	3650	2330	4710	3410	3650	1400	530	283	432
23	256	300	1780	3330	2420	5040	3330	3750	1380	504	283	436
24	256	354	1900	3030	2620	5450	3230	3910	1460	490	287	439
25	256	347	1820	2680	2860	6050	3140	3720	1570	456	385	439
26	261	432	1960	2300	3310	5700	3160	3470	1470	407	373	439
27	256	689	2170	2190	4050	5380	5580	3250	1470	388	373	434
28	256	2090	2160	2240	4090	5550	7120	3000	1410	374	379	429
29	277	2010	1940	2070	---	5950	8170	2800	1460	344	379	386
30	317	1690	1740	2000	---	6190	7900	2700	1340	328	375	354
31	386	---	1720	2110	---	6380	---	2640	---	305	329	---
TOTAL	8969	16020	75720	88866	76930	142410	174810	132450	59140	31788	7195	10854
MEAN	289	534	2443	2867	2748	4594	5827	4273	1971	1025	232	362
MAX	386	2090	9220	5360	4670	7130	13600	7120	2560	2530	385	446
MIN	256	300	1100	816	1860	2730	3140	2640	1340	305	100	230
AC-FT	17790	31780	150200	176300	152600	282500	346700	262700	117300	63050	14270	21530

CAL YR 1977 TOTAL 285109.00 MEAN 781 MAX 9220 MIN .00 AC-FT 565500
WTR YR 1978 TOTAL 825152.00 MEAN 2261 MAX 13600 MIN 100 AC-FT 1637000

14048000 JOHN DAY RIVER AT MCDONALD FERRY, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1911-12, 1960-68, 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1975 to current year.
WATER TEMPERATURES: October 1962 to September 1968, October 1975 to current year.
SEDIMENT CONCENTRATIONS: October 1962 to September 1968.
SEDIMENT DISCHARGE: October 1962 to September 1968.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 438 micromhos July 1, 1978; minimum, 70 micromhos Apr. 3, 1978.
WATER TEMPERATURES: Maximum, 33.0°C Aug. 12, 1977; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 438 micromhos July 1; minimum, 70 micromhos Apr. 3.
WATER TEMPERATURES: Maximum, 29.5°C July 23, Aug. 8; minimum, 0.0°C Nov. 20-24, Dec. 31 to Jan. 6.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)
NOV 10...	1030	426	6.9	8.6	12.4	278	39	2700	21	25
DEC 06...	1000	2250	6.0	7.8	12.6	161	950	2500	27	16
JAN 12...	0900	3850	4.4	7.9	12.6	158	1000	980	27	18
31...	1000	2130	3.6	8.0	12.3	190	K67	480	32	20
FEB 22...	1100	2360	7.7	8.4	11.7	201	33	35	31	20
MAR 13...	1330	5460	7.7	7.6	11.2	139	K136	260	29	19
APR 12...	1300	4810	13.0	8.1	10.3	153	76	K9	31	16
MAY 09...	1100	3950	15.5	8.1	9.8	149	89	55	29	16
JUN 14...	1500	974	19.4	8.7	9.0	151	266	36	23	15
JUL 06...	1100	1770	--	--	--	251	--	--	24	21
AUG 16...	1300	158	19.3	8.9	10.2	290	K170	K43	7.7	24
SEP 26...	1230	439	19.6	8.9	10.8	295	850	330	20	28

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
NOV 10...	12	15	2.1	130	5.8	2.7	.1	.66	--	.01
DEC 06...	6.5	7.8	1.6	63	4.9	1.8	.1	1.4	--	.03
JAN 12...	8.8	9.3	2.2	75	7.0	2.2	.1	2.2	--	.07
31...	8.2	9.6	1.6	90	7.0	2.1	.1	.34	.47	.00
FEB 22...	8.3	9.4	1.5	98	7.2	2.0	.1	.46	1.2	.01
MAR 13...	6.0	6.3	1.2	66	5.9	1.1	.1	.41	.47	.03
APR 12...	6.2	6.3	1.4	74	3.6	1.4	.1	.08	.53	.01
MAY 09...	6.4	6.9	1.3	75	5.4	1.4	.1	--	--	.03
JUN 14...	7.2	7.1	1.4	72	6.3	1.1	.1	.17	.16	.01
JUL 06...	7.8	14	2.7	130	8.5	.5	.1	2.0	12	.36
AUG 16...	12	20	3.0	140	13	4.0	.1	--	.40	.02
SEP 26...	12	17	2.4	140	13	3.3	.2	.34	.42	.01

14048000 JOHN DAY RIVER AT MCDONALD FERRY, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV 10...	.01	--	.02	.03	--	--	13	110	0
DEC 06...	.21	--	.01	.31	--	--	8.6	67	4
JAN 12...	.20	--	.11	.31	--	--	9.7	81	7
31...	.22	.69	.05	.09	--	--	4.9	84	0
FEB 22...	.08	1.3	.04	.08	--	--	3.4	84	0
MAR 13...	.08	.58	.11	.21	--	--	9.8	72	7
APR 12...	.09	.63	.02	.10	4.4	1.2	--	66	0
MAY 09...	.02	--	.02	.09	--	--	3.2	66	0
JUN 14...	.01	.18	--	.01	--	--	2.8	67	0
JUL 06...	.58	13	.19	7.4	--	--	--	85	0
AUG 16...	.02	.44	.01	.01	3.6	--	3.4	110	0
SEP 26...	.01	.44	.01	.06	--	--	3.5	120	0

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	TUR-BID-ITY (JTU)	TUR-BID-ITY (NTU)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)
NOV 10...	159	163	183	7	--	10	12	96	--
DEC 06...	108	104	656	130	--	327	1990	98	326
JAN 12...	115	119	1200	130	--	475	4940	90	--
31...	131	135	753	20	--	48	276	92	43
FEB 22...	125	139	796	10	--	30	191	88	33
MAR 13...	96	108	1420	46	--	168	2480	74	92
APR 12...	104	111	1350	25	--	98	1270	66	70
MAY 09...	112	112	1190	--	8.6	80	853	53	42
JUN 14...	107	104	281	--	2.8	17	45	84	12
JUL 06...	147	158	703	--	2400	5490	26200	99	4890
AUG 16...	160	168	68.3	--	2.6	8	3.4	86	2
SEP 26...	184	180	218	--	5.0	--	--	--	15

DATE	IRON, DIS-SOLVED (UG/L AS FE)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	ARSENIC DIS-SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)
NOV 10...	20	350	0	30	1	1	0	300	1
JAN 31...	160	1800	10	40	1	1	100	100	0
APR 12...	70	3100	0	70	2	1	300	300	1
JUL 06...	450	230000	0	7600	1	1	300	700	0

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)
NOV 10...	2	4	4	0	0	3	14	2	19
JAN 31...	0	0	0	0	0	6	13	2	11
APR 12...	2	0	0	0	0	7	42	3	45
JUL 06...	0	0	100	1	88	11	1100	2	31

14048000 JOHN DAY RIVER AT MCDONALD FERRY, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SILVER, DIS-SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SELE-NIUM, TOTAL (UG/L AS SE)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)
NOV 10...	0	0	20	70	0	0	.0	.1
JAN 31...	0	0	20	30	0	0	.0	.1
APR 12...	0	0	10	40	0	0	.0	.0
JUL 06...	0	1	10	360	0	2	.0	.2

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SIMA-ZINE TOTAL COUL-SON COND. (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)
DEC 06...	ND	ND	ND	ND	ND	ND	ND	ND
FEB 22...	ND	ND	ND	ND	ND	ND	ND	ND
MAY 09...	ND	ND	ND	ND	ND	ND	ND	ND
AUG 16...	ND	ND	ND	ND	ND	ND	ND	ND

DATE	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)
DEC 06...	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 22...	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 09...	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
DEC 06...	ND	ND	ND	ND	ND	ND	ND	ND
FEB 22...	ND	ND	ND	ND	ND	ND	ND	ND
MAY 09...	ND	ND	ND	--	--	--	ND	ND
AUG 16...	ND	ND	ND	--	--	--	ND	ND

DATE	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
MAY 09...	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)
MAY 09...	ND	ND	ND	ND	ND	ND	ND	ND

14048000 JOHN DAY RIVER AT MCDONALD FERRY, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO AUGUST 1978

DATE	DEC 6,77		MAR 13,78		MAY 9,78		AUG 16,78	
TIME	1000		1330		1100		1300	
TOTAL CELLS/ML	8900		900		410		2200	
DIVERSITY: DIVISION	1.0		0.5		0.0		1.0	
.CLASS	1.0		0.5		0.0		1.0	
..ORDER	1.0		0.6		0.4		1.2	
...FAMILY	3.1		3.0		2.8		1.5	
....GENUS	3.4		3.1		3.4		1.6	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...COELASTRACEAE								
....COELASTRUM	1500#	17	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	150	2	--	-	--	-	29	1
....OOCYSTIS	--	-	--	-	--	-	29	1
....QUADRIGULA	--	-	86	10	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	--	-	--	-	--	-	160	7
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	14	2	--	-	--	-
..ZYGNEMATALES								
...DESMIDIACEAE								
....CLOSTERIUM	--	-	--	-	--	-	29	1
....COSMARIUM	--	-	--	-	--	-	58	3
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	--	-	*	0	29	7	58	3
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	43	5	57	14	--	-
....COCCONEIS	900	10	--	-	29	7	43	2
....RHOICOSPHENIA	--	-	14	2	--	-	--	-
...CYMBELLACEAE								
....AMPHORA	75	1	--	-	--	-	--	-
....CYMBELLA	670	8	43	5	14	3	--	-
....EPITHEMIA	900	10	57	6	29	7	14	1
....RHOPALODIA	75	1	--	-	--	-	--	-
...DIATOMACEAE								
....DIATOMA	670	8	110	13	29	7	--	-
...FRAGILARIACEAE								
....SYNEDRA	1400#	16	86	10	14	3	29	1
...GOMPHONEMATACEAE								
....GOMPHONEMA	150	2	170#	19	43	10	--	-
...NAVICULACEAE								
....GYROSIGMA	75	1	--	-	--	-	--	-
....NAVICULA	970	11	190#	21	86#	21	43	2
....PINNULARIA	--	-	--	-	43	10	--	-
...NITZSCHIACEAE								
....NITZSCHIA	750	8	86	10	14	3	43	2
...SURIRELLACEAE								
....SURIRELLA	--	-	*	0	29	7	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROCCOCCALES								
...CHROCCOCCAEAE								
....ANACYSTIS	--	-	--	-	--	-	1700#	76
..HORMOGONALES								
...NOSTOCACEAE								
....APHANIZOMENON	600	7	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM, EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED, LESS THAN 1/2%

14048000 JOHN DAY RIVER AT MCDONALD FERRY, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
FEB 22...	23	.000	.000	.000	.000
MAY 09...	57	14.2	15.6	4.21	.830
JUN 14...	36	15.8	18.1	2.17	.200
AUG 16...	41	--	--	6.76	1.18

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	341	329	182	209	197	133	180	157	144	420	333	325
2	338	331	162	205	197	127	143	152	148	345	333	339
3	338	329	159	200	200	121	82	151	156	312	338	350
4	340	328	149	147	203	114	81	156	161	310	355	345
5	334	325	153	124	202	111	99	163	165	282	360	329
6	318	319	159	134	200	111	107	169	167	264	367	318
7	313	306	153	142	195	109	114	165	166	272	375	325
8	314	295	148	148	187	109	117	157	164	245	380	330
9	309	293	149	151	185	109	118	154	162	243	381	337
10	301	286	152	155	176	124	124	155	157	263	364	341
11	304	282	156	158	169	142	137	157	153	269	343	343
12	307	278	161	162	169	144	150	151	153	252	331	348
13	303	277	169	166	171	143	166	135	149	247	317	355
14	300	276	198	168	174	151	172	130	150	249	308	350
15	303	272	232	185	178	155	184	131	157	252	300	334
16	307	268	246	204	182	164	190	134	166	248	291	330
17	309	266	250	206	185	180	188	129	173	243	296	317
18	310	264	249	202	184	201	197	125	179	242	300	304
19	311	260	248	199	188	216	224	125	185	241	305	296
20	312	257	246	200	191	224	251	127	189	240	312	300
21	315	258	244	200	194	236	236	130	192	239	319	301
22	316	261	243	203	196	248	232	129	191	236	319	297
23	320	258	240	202	188	252	218	132	188	235	319	298
24	332	254	237	198	179	251	212	128	185	231	316	298
25	335	242	236	196	167	258	217	121	180	234	320	295
26	334	229	233	196	156	248	213	120	179	248	338	291
27	333	224	229	197	147	248	216	123	199	264	336	293
28	328	231	225	198	139	254	229	128	206	281	328	292
29	326	245	221	198	---	234	208	134	217	303	318	286
30	327	227	217	197	---	224	164	140	337	327	305	285
31	328	---	213	195	---	215	---	143	---	332	315	---

14048000 JOHN DAY RIVER AT MCDONALD FERRY, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1			---	---	8.0	5.5	.0	.0	4.0	4.0	7.0	5.5
2			---	---	9.5	8.0	.0	.0	5.0	4.0	6.0	4.5
3			---	---	9.0	8.0	.0	.0	7.0	5.0	5.0	4.5
4			---	---	7.5	6.0	.0	.0	6.5	6.0	4.5	3.5
5			---	---	7.0	6.0	.5	.0	6.0	6.0	5.5	4.0
6			---	---	6.5	5.5	1.0	.0	6.0	5.5	6.5	4.5
7			---	---	6.0	4.5	1.5	.5	6.5	6.0	7.5	6.0
8			---	---	4.5	4.0	2.5	1.5	6.5	5.5	9.0	7.5
9			---	---	4.0	3.5	3.0	2.5	7.0	6.0	10.5	8.0
10			---	---	4.0	3.5	3.5	3.0	6.0	5.0	10.5	8.5
11			6.5	6.0	5.5	4.0	4.5	3.5	5.5	4.0	9.0	7.5
12			7.0	5.5	6.0	5.5	4.5	4.5	4.5	4.0	8.0	6.5
13			8.5	7.0	7.5	6.0	4.5	4.0	5.0	3.5	7.5	6.5
14			8.5	7.5	8.5	7.5	4.0	4.0	4.5	3.5	7.5	5.5
15			9.5	7.5	8.0	7.0	4.5	4.0	5.5	4.0	8.0	5.5
16			7.5	6.0	6.5	6.0	5.0	4.5	5.0	4.0	9.0	6.5
17			6.0	4.5	6.0	5.0	6.0	5.0	5.5	5.0	11.0	7.5
18			4.5	3.5	5.0	4.0	6.0	5.5	6.0	5.0	12.5	9.5
19			3.5	1.5	4.0	3.0	6.0	5.5	6.0	5.5	12.0	10.0
20			1.5	.0	3.5	2.5	6.5	5.5	7.0	6.0	13.0	10.5
21			.0	.0	2.5	2.0	6.5	6.0	7.5	7.0	13.0	11.0
22			.5	.0	1.5	1.0	6.0	5.0	8.0	7.5	13.0	11.0
23			.5	.0	1.5	1.0	5.0	4.0	9.5	8.0	12.0	10.5
24			.5	.0	1.5	1.0	4.0	3.5	9.5	7.5	11.0	10.0
25			1.0	.5	1.5	1.0	4.0	3.5	7.5	7.0	11.5	10.0
26			3.0	.5	1.5	1.0	4.5	3.5	8.0	7.0	12.0	9.5
[illegible]			5.0	3.0	1.0	1.0	4.0	3.0	8.0	7.0	13.0	10.5
[illegible]			5.5	4.5	1.0	1.0	4.0	3.5	8.0	6.5	14.0	12.5
[illegible]			6.5	5.5	1.0	1.0	4.0	4.0	---	---	14.0	12.5
[illegible]			6.0	5.0	2.0	1.0	4.0	4.0	---	---	13.5	12.0
[illegible]			---	---	2.0	.0	4.0	3.5	---	---	12.5	11.0
MONTH			9.5	.0	9.5	.0	6.5	.0	9.5	3.5	14.0	3.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.5	11.0	14.0	11.0	21.0	17.0	25.0	20.0	26.0	20.5	22.5	17.5
2	11.5	10.5	14.5	12.5	22.0	18.0	22.0	20.0	28.0	21.5	24.0	19.5
3	10.5	9.0	14.0	12.0	23.5	19.5	21.0	19.0	29.0	23.5	24.5	20.5
4	9.5	8.5	13.0	11.5	24.5	20.5	19.5	18.0	28.5	24.0	21.0	18.5
5	10.5	8.0	13.0	11.0	25.0	21.5	22.5	17.5	27.5	21.0	20.5	17.5
6	9.5	9.0	14.0	11.0	23.5	21.5	24.5	20.0	29.0	22.0	21.0	17.5
7	10.5	8.0	15.0	11.5	23.5	21.0	25.5	22.0	29.0	24.0	18.0	15.5
8	10.5	8.5	16.5	12.5	24.0	20.5	24.5	21.5	29.5	24.0	17.5	14.0
9	11.5	8.5	16.5	14.5	22.0	19.5	23.5	20.5	28.0	24.0	16.5	16.0
10	13.0	10.0	16.0	13.5	20.5	18.5	21.5	18.5	25.5	21.5	17.0	14.5
11	13.0	10.5	16.0	14.0	21.5	17.5	23.0	18.5	25.0	20.5	18.5	14.5
12	14.0	11.0	15.0	14.0	21.0	19.0	25.0	20.0	22.0	19.5	19.5	14.5
13	13.5	11.5	14.0	13.5	21.0	18.0	26.5	21.5	22.0	17.5	18.0	16.5
14	13.0	11.0	14.0	13.0	19.5	17.5	27.5	23.0	22.5	17.5	19.5	15.0
15	13.0	11.0	15.0	12.0	20.0	16.5	28.5	23.5	21.0	18.5	18.0	15.5
16	12.0	10.0	15.5	13.0	21.0	16.5	22.5	18.5	20.5	16.0	17.0	13.5
17	11.5	10.0	16.5	13.0	23.0	18.0	24.0	17.5	21.0	15.5	14.5	12.5
18	13.0	10.5	17.0	14.0	22.0	20.0	25.5	20.0	22.0	17.0	15.5	11.5
19	13.5	11.5	18.5	15.0	24.0	18.5	27.0	21.5	21.0	18.0	17.0	12.0
20	12.5	10.5	20.0	16.0	25.0	20.5	27.5	22.0	20.0	18.0	17.5	13.5
21	12.5	10.5	19.0	17.0	24.0	21.0	28.0	22.5	22.5	18.5	17.5	15.0
22	11.0	10.0	18.0	15.5	23.5	19.5	29.0	23.0	19.5	17.5	17.0	14.0
23	12.0	9.5	16.5	14.0	23.5	20.5	29.5	25.0	21.0	16.5	19.5	15.0
24	13.5	11.0	16.5	14.0	20.5	18.0	27.5	22.5	22.0	19.0	20.0	16.5
25	13.5	12.0	16.5	14.0	21.0	17.0	28.5	22.5	23.0	19.0	20.0	16.5
26	13.0	12.0	15.5	14.0	22.5	18.5	26.5	24.0	23.0	18.5	21.5	17.5
27	12.0	11.5	17.0	13.5	23.5	19.5	25.0	21.0	24.0	19.5	19.0	17.0
28	14.0	11.5	17.5	14.5	24.0	21.0	26.0	20.5	25.0	20.0	19.5	16.5
29	13.0	11.0	18.0	14.0	23.5	21.0	28.0	22.0	25.5	21.0	20.0	16.5
30	13.0	11.0	19.0	15.0	23.5	20.5	27.0	23.0	23.5	21.5	18.5	15.5
31	---	---	20.0	16.5	---	---	26.5	21.0	21.0	19.0	---	---
MONTH	14.0	8.0	20.0	11.0	25.0	16.5	29.5	17.5	29.5	15.5	24.5	11.5

14050000 DESCHUTES RIVER BELOW SNOW CREEK, NEAR LA PINE, OR

LOCATION.--Lat 43°48'51", long 121°46'33", in NW¼ sec.28, T.20 S., R.8 E., Deschutes County, Hydrologic Unit 17070301, in Deschutes National Forest, on left bank at flow line of Crane Prairie Reservoir, 20 ft (6 m) downstream from Snow Creek, 300 ft (91 m) upstream from highway bridge, and 17 mi (27 km) northwest of La Pine.

DRAINAGE AREA.--132 mi^2 (342 km^2), including Sparks, Elk, and Mud Lake basins, which have no surface outflow to Deschutes River; hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only October 1937, published in WSP 1318. Published as "near Lapine" 1937-64.

REVISED RECORDS.--WSP 1248: 1951.

GAGE.--Water-stage recorder. Altitude of gage is 4,445 ft (1,355 m), from elevation of Crane Prairie Reservoir when slack water extended to gage. Prior to Sept. 10, 1938, nonrecording gage at site 450 ft (137 m) downstream at different datum.

REMARKS.--Records good. No regulation. Crater Creek Canal diverts water to Tumalo Creek basin from tributaries of Soda Creek. Stream is spring fed and peak discharge may occur several months after the precipitation which caused it.

AVERAGE DISCHARGE.--41 years, 153 ft^3/s (4.333 m^3/s), 110,800 acre-ft/yr (137 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 480 ft^3/s (13.6 m^3/s) Aug. 19, 1974, gage height, 3.17 ft (0.966 m); maximum gage height, 4.12 ft (1.256 m) Jan. 21, 1943 (ice jam); minimum discharge, 40 ft^3/s (1.13 m^3/s) sometime during period Dec. 22, 1959, to Mar. 2, 1960, result of freezeup; minimum daily, 55 ft^3/s (1.56 m^3/s) for many days April to June 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 148 ft^3/s (4.19 m^3/s) Sept. 9, gage height, 1.50 ft (0.457 m); minimum, 50 ft^3/s (1.42 m^3/s) Nov. 20, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	64	62	69	78	78	86	86	80	91	102	130
2	69	64	72	68	80	78	86	86	80	91	102	130
3	72	62	75	73	83	78	86	86	80	88	105	133
4	69	62	67	78	80	78	86	86	83	88	105	133
5	69	62	64	78	80	80	86	86	86	88	105	136
6	69	62	69	78	78	78	86	86	86	86	102	136
7	69	62	67	78	80	78	86	86	86	86	105	139
8	69	59	64	78	80	80	86	86	83	80	110	139
9	69	62	64	78	80	83	86	86	88	83	110	136
10	67	62	64	80	80	83	86	88	88	91	110	142
11	67	62	67	80	80	83	86	88	86	88	113	139
12	69	62	67	80	80	80	86	88	83	80	118	136
13	69	64	86	80	80	80	86	88	86	78	118	139
14	67	64	96	80	80	80	86	88	88	80	118	133
15	67	64	88	83	83	80	86	88	88	78	121	136
16	64	62	80	83	80	80	86	88	88	83	121	133
17	64	62	78	83	83	80	86	88	88	83	121	133
18	62	62	75	83	83	80	86	88	88	86	121	133
19	62	62	72	80	83	83	86	88	88	78	124	130
20	59	58	67	80	83	83	86	86	88	83	124	130
21	59	56	69	80	83	83	86	88	91	86	127	130
22	59	56	75	80	83	83	86	88	88	86	127	130
23	59	59	75	80	83	83	88	86	91	88	127	127
24	59	64	78	78	83	83	88	86	91	88	130	127
25	62	67	78	78	83	83	88	86	91	96	130	130
26	64	62	75	78	83	83	88	86	91	94	130	127
27	64	59	75	78	80	83	88	83	91	102	130	127
28	64	59	75	78	80	83	86	86	91	102	130	127
29	64	69	75	78	---	83	86	86	91	99	130	124
30	69	59	78	78	---	83	86	83	94	99	130	124
31	67	---	75	78	---	86	---	80	---	99	130	---
TOTAL	2031	1853	2272	2434	2272	2519	2590	2678	2621	2728	3676	3969
MEAN	65.5	61.8	73.3	78.5	81.1	81.3	86.3	86.4	87.4	88.0	119	132
MAX	72	69	96	83	83	86	88	88	94	102	130	142
MIN	59	56	62	68	78	78	86	80	80	78	102	124
AC-FT	4030	3680	4510	4830	4510	5000	5140	5310	5200	5410	7290	7870

CAL YR 1977 TOTAL 30301 MEAN 83.0 MAX 138 MIN 56 AC-FT 60100
WTR YR 1978 TOTAL 31643 MEAN 86.7 MAX 142 MIN 56 AC-FT 62760

14050500 CULTUS RIVER ABOVE CULTUS CREEK, NEAR LAPINE, OR

LOCATION.--Lat 43°49'06", long 121°47'40", near line between secs.20 and 29, T.20 S., R.8 E., Deschutes County, Hydrologic Unit 17070301, Deschutes National Forest, on left bank at highway culvert, 2 mi (3 km) upstream from Cultus Creek, and 18 mi (29 km) northwest of La Pine.

DRAINAGE AREA.--16.5 mi² (42.7 km²), hydrologic drainage boundry uncertain owing to ground-water exchange.

PERIOD OF RECORD.--October 1922 to September 1925, October 1937 to current year. Monthly discharge only October 1937, published in WSP 1318. Prior to Oct. 1, 1964, published as "near Lapine."

REVISED RECORDS.--WSP 1448: 1923-25, 1947.

GAGE.--Water-stage recorder and cement bag control. Altitude of gage is 4,450 ft (1,356 m), by barometer. Oct. 1, 1922, to Sept. 30, 1925, nonrecording gage at site 0.5 mi (0.8 km) upstream at different datum.

REMARKS.--Records good. No regulation or diversions above station.

AVERAGE DISCHARGE.--44 years, 63.3 ft³/s (1.793 m³/s), 45,860 acre-ft/yr (56.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 178 ft³/s (5.04 m³/s) May 31, 1956, gage height, 1.04 ft (0.317 m); maximum gage height, 1.32 ft (0.402 m) May 16, 1972 (backwater from Crane Prairie Reservoir); minimum discharge, 26 ft³/s (0.74 m³/s) May 26-31, Nov. 23 to Dec. 4, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 56 ft³/s (1.59 m³/s) Aug. 17-21, 23-26, Sept. 7-10, 12-14; maximum gage height, 0.83 ft (0.253 m) July 25, temporary backwater; minimum discharge, 32 ft³/s (0.91 m³/s) Oct. 6-12, Nov. 12 to Dec. 2, Dec. 8-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	35	32	35	39	40	41	44	47	52	52	54
2	35	34	34	35	39	40	43	44	47	52	52	54
3	35	34	34	35	39	40	43	46	47	52	52	54
4	35	34	34	35	39	41	43	47	47	52	50	54
5	34	34	34	36	39	41	43	47	49	50	52	54
6	32	34	34	36	39	41	43	47	49	50	52	54
7	32	34	34	36	40	41	43	47	49	50	52	56
8	32	34	32	36	39	41	43	47	49	52	50	56
9	32	34	32	36	39	43	43	49	50	52	50	56
10	32	34	32	36	39	43	43	47	52	52	50	56
11	32	34	32	36	39	43	43	49	50	52	52	54
12	32	32	32	36	39	43	43	49	50	52	52	56
13	34	32	35	37	40	41	44	49	50	52	54	56
14	34	32	36	37	40	41	44	49	49	52	54	56
15	35	32	36	37	40	41	44	50	50	52	54	54
16	35	32	36	37	40	41	46	50	50	52	54	54
17	36	32	36	37	40	41	46	49	50	52	56	54
18	36	32	36	37	40	41	46	50	50	52	56	54
19	36	32	35	39	40	41	46	50	50	50	56	54
20	36	32	35	39	39	41	47	50	52	50	56	52
21	36	32	35	39	39	41	47	50	52	52	56	52
22	36	32	35	39	39	41	47	49	52	52	54	52
23	36	32	35	39	39	41	47	49	52	52	56	50
24	35	34	35	39	39	41	47	49	52	54	56	50
25	35	34	35	39	39	41	47	49	54	54	56	50
26	35	32	35	39	39	41	47	49	54	54	56	50
27	35	32	35	39	39	41	47	49	54	54	54	50
28	35	32	35	39	40	41	47	49	54	54	54	50
29	35	32	35	40	---	41	46	49	54	52	54	49
30	35	32	35	40	---	41	44	47	54	54	54	49
31	35	---	35	39	---	41	---	47	---	54	54	---
TOTAL	1068	987	1066	1159	1101	1276	1343	1496	1519	1616	1660	1594
MEAN	34.5	32.9	34.4	37.4	39.3	41.2	44.8	48.3	50.6	52.1	53.5	53.1
MAX	36	35	36	40	40	43	47	50	54	54	56	56
MIN	32	32	32	35	39	40	41	44	47	50	50	49
AC-FT	2120	1960	2110	2300	2180	2530	2660	2970	3010	3210	3290	3160

CAL YR 1977 TOTAL 15496 MEAN 42.5 MAX 63 MIN 32 AC-FT 30740
WTR YR 1978 TOTAL 15885 MEAN 43.5 MAX 56 MIN 32 AC-FT 31510

14051000 CULTUS CREEK ABOVE CRANE PRAIRIE RESERVOIR, NEAR LA PINE, OR

LOCATION.--Lat 43°49'17", long 121°49'22", in SW¼ sec.19, T.20 S., R.8 E., Deschutes County, Hydrologic Unit 17070301, on left bank 1,000 ft (305 m) upstream from highway bridge, 1.0 mi (1.6 km) downstream from Cultus Lake, and 19 mi (31 km) northwest of La Pine.

DRAINAGE AREA.--33.2 mi² (86.0 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--March to September 1924 (published as "above Crane Prairie, near Lapine"), October 1937 to current year. Monthly discharge only October 1937 to September 1949, published in WSP 1318. Records for October 1923 to February 1924, published in WSP 594, have been found to be unreliable and should not be used. Published as "near Lapine" 1937-64.

REVISED RECORDS.--WSP 1568: 1957. WRD Oreg. 1973: 1972. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Altitude of gage is 4,545 ft (1,385 m), by barometer. Mar. 1 to Sept. 30, 1924, nonrecording gage at site 100 ft (30 m) upstream at different datum.

REMARKS.--Records good. Some regulation by fish screens at Cultus Lake since 1962. No diversion above station.

AVERAGE DISCHARGE.--41 years (water years 1938-78), 22.9 ft³/s (0.649 m³/s), 16,590 acre-ft/yr (20.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 336 ft³/s (9.52 m³/s) Dec. 25, 1964, gage height, 4.15 ft (1.265 m), from floodmark, from rating curve extended above 90 ft³/s (2.55 m³/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 162 ft³/s (4.59 m³/s) Dec. 15, gage height, 3.08 ft (0.939 m); no flow Oct. 1 to Nov. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	22	50	20	12	17	25	35	18	4.5	.30
2	.00	.00	26	48	20	12	18	25	35	18	4.2	.25
3	.00	.00	40	45	23	12	19	25	35	17	3.8	.25
4	.00	.00	47	43	22	12	20	26	34	17	3.5	.25
5	.00	.00	48	42	22	13	20	26	34	16	3.2	.30
6	.00	.00	51	40	22	14	20	26	34	15	3.2	.50
7	.00	.00	56	38	23	14	20	26	34	15	2.9	.45
8	.00	.00	56	35	25	15	20	26	34	15	2.9	.40
9	.00	.00	54	34	25	15	20	27	34	14	2.7	.40
10	.00	.00	52	33	23	14	19	29	35	13	2.4	.50
11	.00	.00	53	32	22	14	19	30	34	12	2.0	.46
12	.00	.00	53	31	21	14	19	30	34	12	1.8	.42
13	.00	.00	65	31	20	13	18	31	32	11	1.6	.37
14	.00	.00	108	31	20	11	18	38	30	11	1.2	.33
15	.00	.00	155	31	20	10	18	41	29	10	1.2	.30
16	.00	.00	152	32	18	10	18	42	28	9.7	1.2	.27
17	.00	.00	147	32	18	10	18	41	27	9.2	1.1	.24
18	.00	.00	143	31	17	10	18	40	26	8.8	1.0	.22
19	.00	.00	142	31	16	10	18	39	26	8.3	.80	.20
20	.00	.00	122	30	15	10	18	40	26	7.9	.65	.18
21	.00	.00	112	29	15	11	19	41	25	7.1	.65	.16
22	.00	.00	105	29	14	11	19	41	23	7.1	.65	.14
23	.00	.00	96	28	14	12	19	41	22	6.7	.40	.13
24	.00	.18	90	26	14	12	18	40	22	6.3	.40	.11
25	.00	.50	84	25	14	13	20	40	20	5.9	.50	.10
26	.00	4.2	77	24	14	13	21	39	20	6.7	.40	.10
27	.00	18	74	23	13	13	22	39	19	6.7	.40	.10
28	.00	14	68	22	13	14	22	39	18	6.3	.30	.08
29	.00	17	63	21	---	14	22	38	19	5.9	.30	.06
30	.00	20	60	20	---	15	24	37	19	5.6	.30	.04
31	.00	---	56	20	---	16	---	36	---	5.2	.30	---
TOTAL	.00	73.88	2477	987	523	389	581	1064	843	327.4	50.45	7.61
MEAN	.000	2.46	79.9	31.8	18.7	12.5	19.4	34.3	28.1	10.6	1.63	.25
MAX	.00	20	155	50	25	16	24	42	35	18	4.5	.50
MIN	.00	.00	22	20	13	10	17	25	18	5.2	.30	.04
AC-FT	.00	147	4910	1960	1040	772	1150	2110	1670	649	100	15

CAL YR 1977 TOTAL 3607.47 MEAN 9.88 MAX 155 MIN .00 AC-FT 7160
WTR YR 1978 TOTAL 7323.34 MEAN 20.1 MAX 155 MIN .00 AC-FT 14530

NOTE.--No gage-height record Feb. 12 to Mar. 20.

14052000 DEER CREEK ABOVE CRANE PRAIRIE RESERVOIR, NEAR LA PINE, OR

LOCATION.--Lat 43°48'48", long 121°50'18", in SE¼SW¼ sec.25, T.20 S., R.7 E., Deschutes County, Hydrologic Unit 17070301, on right bank 150 ft (46 m) downstream from highway bridge, 1.2 mi (1.9 km) downstream from Little Cultus Lake, and 19 mi (31 km) northwest of La Pine.

DRAINAGE AREA.--21.5 mi^2 (55.7 km^2), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--February to September 1924 (published as "above Crane Prairie, near Lapine"), October 1937 to current year. Monthly discharge only October 1937 to September 1949, published in WSP 1318. Records for October 1923 to January 1924, published in WSP 594, have been found to be unreliable and should not be used. Published as "near Lapine" 1937-64.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder and wooden weir control. Altitude of gage is 4,520 ft (1,378 m), by barometer. Feb. 1 to Sept. 30, 1924, nonrecording gage at site 75 ft (23 m) upstream at various datums. Oct. 1, 1937, to Sept. 30, 1938, water-stage recorder at bridge 150 ft (46 m) upstream at different datum. Oct. 1, 1938, to Aug. 13, 1968, water-stage recorder and wooden weir control at present site and datum 0.60 ft (0.183 m) higher.

REMARKS.--Records good prior to July 20, fair thereafter. No regulation or diversion above station.

AVERAGE DISCHARGE.--41 years (water years 1938-78), 7.53 ft^3/s (0.213 m^3/s), 5,460 acre-ft/yr (6.73 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 200 ft^3/s (5.66 m^3/s), estimated, Dec. 25, 1964; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 123 ft^3/s (3.48 m^3/s) Dec. 14, gage height, 2.93 ft (0.893 m); no flow Oct. 1-24, 27, Nov. 3-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.10	5.2	8.8	4.5	3.7	15	14	4.5	.94	.12	.12
2	.00	.10	5.5	8.3	4.9	3.4	15	13	4.2	.94	.12	.12
3	.00	.00	9.0	8.3	6.7	3.6	15	13	3.9	.94	.12	.12
4	.00	.00	13	7.8	6.1	3.7	15	13	3.7	.78	.08	.12
5	.00	.00	14	7.8	5.7	3.9	14	13	3.3	.78	.08	.20
6	.00	.00	15	7.3	5.9	3.9	13	12	3.0	.70	.08	.20
7	.00	.00	13	6.7	7.1	3.9	12	12	2.5	.78	.08	.16
8	.00	.00	13	6.1	7.8	4.6	10	11	2.3	.78	.08	.16
9	.00	.00	11	6.5	7.8	4.9	9.3	11	2.1	.70	.08	.16
10	.00	.00	11	6.9	7.0	4.9	9.3	11	2.3	.60	.08	.16
11	.00	.00	11	6.7	5.9	4.8	9.0	13	2.4	.40	.08	.12
12	.00	.00	11	6.5	5.6	4.6	8.8	13	2.3	.30	.08	.08
13	.00	.00	20	7.1	5.2	4.5	9.0	15	2.2	.40	.12	.04
14	.00	.00	61	8.3	4.8	4.3	8.8	15	2.0	.30	.08	.04
15	.00	.00	108	9.3	5.4	4.3	8.8	16	2.1	.30	.12	.02
16	.00	.00	88	10	5.1	4.2	9.0	16	1.9	.30	.12	.02
17	.00	.00	71	10	4.9	4.2	9.3	15	1.8	.20	.08	.02
18	.00	.00	52	9.8	4.6	4.3	8.8	13	1.7	.20	.08	.04
19	.00	.00	37	9.5	4.3	4.5	8.8	12	1.4	.20	.08	.04
20	.00	.00	28	8.5	4.2	4.8	8.5	12	1.3	.13	.08	.04
21	.00	.00	23	8.0	4.0	5.1	9.0	12	1.4	.12	.08	.04
22	.00	.00	19	7.8	4.0	5.5	9.3	11	1.3	.08	.08	.04
23	.00	.00	17	7.0	3.9	6.9	9.0	10	1.2	.12	.08	.04
24	.00	.20	17	6.4	3.9	7.8	8.8	9.8	1.1	.12	.08	.04
25	.20	1.2	15	5.5	3.9	8.5	9.5	9.3	1.0	.12	.12	.04
26	.10	.86	13	5.4	3.9	9.5	11	8.0	.94	.26	.12	.04
27	.00	.30	12	5.1	3.7	10	11	7.5	.86	.20	.12	.08
28	.10	.20	11	4.8	3.7	11	12	7.1	.86	.16	.12	.08
29	.20	2.1	11	4.8	---	12	13	6.1	.94	.12	.12	.08
30	.20	4.5	11	4.6	---	13	13	5.4	.94	.12	.12	.08
31	.10	---	9.8	4.5	---	14	---	4.8	---	.12	.12	---
TOTAL	.90	9.56	755.5	224.1	144.5	188.3	322.0	354.0	61.44	12.21	3.00	2.54
MEAN	.029	.32	24.4	7.23	5.16	6.07	10.7	11.4	2.05	.39	.097	.085
MAX	.20	4.5	108	10	7.8	14	15	16	4.5	.94	.12	.20
MIN	.00	.00	5.2	4.5	3.7	3.4	8.5	4.8	.86	.08	.08	.02
AC-FT	1.8	19	1500	445	287	373	639	702	122	24	6.0	5.0

CAL YR 1977 TOTAL 1153.16 MEAN 3.16 MAX 108 MIN .00 AC-FT 2290
WTR YR 1978 TOTAL 2078.05 MEAN 5.69 MAX 108 MIN .00 AC-FT 4120

14052500 QUINN RIVER NEAR LA PINE, OR

LOCATION.--Lat 43°47'03", long 121°50'06", in SW¼NW¼ sec.1, T.21 S., R.7 E., Deschutes County, Hydrologic Unit 17070302, Deschutes National Forest, on left bank at flow line of Crane Prairie Reservoir, 150 ft (46 m) downstream from springs at head of river, and 18 mi (29 km) northwest of La Pine.

DRAINAGE AREA.--Indeterminate, normal flow is entirely from springs 150 ft (46 m) upstream.

PERIOD OF RECORD.--June 1922 to September 1925, October 1937 to current year. Published as "above Crane Prairie Reservoir near Lapine" 1922-25, and as "near Lapine" 1937-64. Monthly discharge only October 1937, published in WSP 1318.

REVISED RECORDS.--WSP 1448: 1939, 1941.

GAGE.--Water-stage recorder and log control. Datum of gage is 4,442.1 ft (1,353.95 m) National Geodetic Vertical Datum of 1929, based on elevation of Crane Prairie Reservoir when slack water reached station. June 1, 1922, to Sept. 30, 1925, nonrecording gage at site 150 ft (46 m) downstream at different datum.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--44 years, 24.3 ft^3/s (0.688 m^3/s), 17,610 acre-ft/yr (21.7 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59 ft^3/s (1.67 m^3/s) July 4, 1949, gage height, 1.97 ft (0.600 m); maximum gage height, 3.92 ft (1.195 m) June 25, 1943 (backwater from Crane Prairie Reservoir); practically no flow Nov. 14, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 26 ft^3/s (0.74 m^3/s) Feb. 26 to Mar. 3; maximum gage height, 2.53 ft (0.771 m) Apr. 11 (backwater from Crane Prairie Reservoir); minimum recorded discharge, 2.2 ft^3/s (0.062 m^3/s) Nov. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	4.1	4.2	13	23	26	24	25	24	23	20	18
2	6.7	4.1	4.3	14	23	26	24	25	24	23	20	18
3	6.7	4.8	4.5	14	23	26	24	25	23	21	19	18
4	6.7	4.1	4.7	14	24	25	24	25	24	21	19	18
5	6.7	3.5	4.9	14	24	25	24	25	24	21	19	18
6	6.7	2.8	5.2	14	24	25	24	25	24	21	19	18
7	6.7	3.5	5.4	15	24	25	24	25	24	21	19	18
8	6.3	4.1	5.6	15	24	25	24	25	24	20	19	18
9	5.4	4.1	5.9	16	25	25	24	25	24	20	19	18
10	5.4	4.1	6.1	16	25	25	24	25	24	20	19	18
11	5.4	4.1	6.4	16	25	25	24	25	24	21	19	18
12	5.4	4.1	6.6	16	25	24	24	25	24	21	19	18
13	4.8	3.4	6.9	17	25	24	24	25	24	21	19	18
14	4.8	4.1	7.3	17	25	24	24	25	24	21	18	18
15	4.8	4.1	7.6	18	25	24	24	25	24	21	18	17
16	4.8	4.1	7.9	18	25	24	24	25	24	21	18	17
17	4.8	4.1	8.3	18	25	24	24	25	24	21	18	17
18	4.8	4.1	8.6	19	25	24	24	25	24	21	18	17
19	4.8	4.1	9.0	20	25	24	24	25	24	21	18	17
20	4.1	4.1	9.4	20	25	23	24	25	24	21	18	17
21	3.5	4.1	9.8	20	25	23	25	25	23	20	18	17
22	4.1	4.1	10	20	25	23	25	25	23	20	18	17
23	4.1	4.1	11	20	25	23	25	25	23	20	18	17
24	4.1	4.0	11	21	25	23	25	25	23	20	18	17
25	4.1	4.0	12	21	25	23	25	25	23	20	18	17
26	4.1	4.0	12	21	26	23	25	25	23	20	19	17
27	4.8	4.0	13	21	26	23	25	25	23	20	19	16
28	3.5	4.0	13	21	26	23	25	25	21	20	19	16
29	4.1	4.0	13	21	---	24	25	24	21	20	19	16
30	3.5	4.0	13	23	---	24	25	24	23	20	19	16
31	4.1	---	13	23	---	24	---	24	---	20	19	---
TOTAL	156.5	119.8	259.6	556	692	749	730	772	705	641	579	520
MEAN	5.05	3.99	8.37	17.9	24.7	24.2	24.3	24.9	23.5	20.7	18.7	17.3
MAX	6.7	4.8	13	23	26	26	25	25	24	23	20	18
MIN	3.5	2.8	4.2	13	23	23	24	24	21	20	18	16
AC-FT	310	238	515	1100	1370	1490	1450	1530	1400	1270	1150	1030

CAL YR 1977 TOTAL 4146.9 MEAN 11.4 MAX 19 MIN 2.8 AC-FT 8230
WTR YR 1978 TOTAL 6479.9 MEAN 17.8 MAX 26 MIN 2.8 AC-FT 12850

NOTE.--No gage-height record Nov. 16 to Dec. 27.

14053000 CHARLTON CREEK ABOVE CRANE PRAIRIE RESERVOIR, NEAR LA PINE, OR

LOCATION.--Lat 43°46'51", long 121°50'06", in NE¼SW¼ sec.1, T.21 S., R.7 E., Deschutes County, Hydrologic Unit 17070301, in Deschutes National Forest, on left bank 3.0 mi (4.8 km) northwest of Crane Prairie Dam and 18.0 mi (29.0 km) northwest of La Pine.

DRAINAGE AREA.--15.6 mi^2 (40.4 km^2), hydrologic drainage boundery uncertain owing to ground-water exchange.

PERIOD OF RECORD.--May and June 1923, October 1937 to September 1951, May to September 1952, May to September 1953, May 1954 to September 1955, May 1956 to October 1962, May 1963 to November 1964, April to December 1965, February to November 1966, March 1967 to December 1970, March 1971 to January 1972, March 1972 to current year. Monthly discharge only prior to October 1949, published in WSP 1318. Prior to Oct. 1, 1964, published as "near Lapine."

GAGE.--Water-stage recorder. Datum of gage is 4,458.70 ft (1,359.012 m) National Geodetic Vertical Datum of 1929. May 1 to June 30, 1923, nonrecording gage at about same site at different datum.

REMARKS.--Records poor. No regulation or diversion above station.

AVERAGE DISCHARGE.--31 years (water years 1938-51, 1955, 1957-62, 1964, 1968-70, 1973-78), 1.36 ft^3/s (0.039 m^3/s), 985 acre-ft/yr (1.21 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54 ft^3/s (1.53 m^3/s) June 12, 1950, gage height, 1.53 ft (0.466 m), from rating curve extended above 27 ft^3/s (0.76 m^3/s); maximum gage height, 2.39 ft (0.728 m) Mar. 9, 1957 (ice jam); no flow for several months each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1964 (discharge not determined) may have exceeded peak of record.

EXTREMES FOR CURRENT YEAR.--Maximum recorded discharge, 4.0 ft^3/s (0.11 m^3/s) May 15, gage height, 0.92 ft (0.280 m); no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	1.8	.50	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.60	.50	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	1.6	.20	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	1.2	.10	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.70	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	1.2	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	1.6	.10	.00	.00	.00
11	.00	.00	.10	.00	.00	.00	.00	2.1	.20	.00	.00	.00
12	.00	.00	.10	.00	.00	.00	.00	1.6	.20	.00	.00	.00
13	.00	.00	.20	.00	.00	.00	.00	2.4	.20	.00	.00	.00
14	.00	.00	.60	.00	.00	.00	.00	2.6	.20	.00	.00	.00
15	.00	.00	2.5	.00	.00	.00	.00	3.5	.20	.00	.00	.00
16	.00	.00	1.2	.00	.00	.00	.00	2.4	.10	.00	.00	.00
17	.00	.00	.50	.00	.00	.00	.00	1.8	.10	.00	.00	.00
18	.00	.00	.20	.00	.00	.00	.00	1.8	.10	.00	.00	.00
19	.00	.00	.10	.00	.00	.00	.00	2.1	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	2.6	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	2.9	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	2.6	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	1.8	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.10	1.8	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.50	1.6	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.80	.80	.00	.00	.00	.00
27	.00	.00	.10	.00	.00	.00	.60	.80	.00	.00	.00	.00
28	.00	.00	.50	.00	.00	.00	.60	.80	.00	.00	.00	.00
29	.00	.00	.50	.00	---	.00	2.6	.90	.00	.00	.00	.00
30	.00	.00	.50	.00	---	.00	2.6	.80	.00	.00	.00	---
31	.00	---	.10	.00	---	.00	---	.60	---	.00	.00	---
TOTAL	.00	.00	7.20	.00	.00	.00	7.80	47.60	2.70	.00	.00	.00
MEAN	.000	.000	.23	.000	.000	.000	.26	1.54	.090	.000	.000	.000
MAX	.00	.00	2.5	.00	.00	.00	2.6	3.5	.50	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00
AC-FT	.00	.00	14	.00	.00	.00	15	94	5.4	.00	.00	.00

CAL YR 1977 TOTAL 7.20 MEAN .020 MAX 2.5 MIN .00 AC-FT 14
WTR YR 1978 TOTAL 65.30 MEAN .18 MAX 3.5 MIN .00 AC-FT 130

14053500 CRANE PRAIRIE RESERVOIR NEAR LA PINE, OR

LOCATION.--Lat 43°45'20", long 121°47"00", in SW¼NW¼ sec.16, T.21 S., R.8 E., Deschutes County, Hydrologic Unit 17070301, in Deschutes National Forest, on control structure at Crane Prairie Dam on Deschutes River, 15.0 mi (24.1 km) northwest of La Pine, and at mile 238.3 (383.4 km).

DRAINAGE AREA.--254 mi² (658 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--November 1922 to November 1935, April to December 1936, April 1937 to current year. Prior to Oct. 1, 1964, published as "near Lapine."

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1318: 1925, 1940-41, 1950. WSP 1448: 1925(M,m), 1940(m), 1950(m).

GAGE.--Water-stage recorder. Datum of gage is 4,400.0 ft (1,341.120 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation); gage readings have been reduced to elevations NGVD. Prior to July 13, 1940, nonrecording gage, at site 150 ft (45.7 m) upstream at same datum. July 13, 1940, to Sept. 15, 1966, nonrecording gage, at present site and datum.

REMARKS.--Reservoir originally formed by earthfill dam completed in 1922, reconstructed as rock-faced, earthfill dam in 1940. Capacity, 55,340 acre-ft (68.2 hm³) between elevation 4,424.0 ft (1,348.44 m) lip of fish-screen structure and 4,445.0 ft (1,354.84 m) crest of spillway. Some dead storage in isolated pools in reservoir at stages below 4,428 ft (1,349.7 m) and natural flow passing through reservoir when outlet gates are open prevents withdrawal of remaining storage to elevation of sill of gates. Crater Creek Canal diverts water to Tumalo Creek basin from tributaries of Soda Creek above station. Released water diverted from Deschutes River near Bend for irrigation near Bend and Redmond.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 60,500 acre-ft (74.6 hm³) June 5-7, 1943, elevation, 4,446.0 ft (1,355.14 m); no usable contents at times.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 53,520 acre-ft (66.0 hm³) Apr. 11, elevation, 4,444.63 ft (1,354.723 m); minimum, 16,500 acre-ft (20.3 hm³) Oct. 1, elevation, 4,435.71 ft (1,352.004 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	4,435.71	16,500	-
Oct. 31	4,437.24	21,910	+5,410
Nov. 30	4,439.03	28,730	+6,820
Dec. 31	4,442.08	41,590	+12,860
CAL YR 1977	-	-	+5,190
Jan. 31	4,443.18	46,610	+5,020
Feb. 28	4,443.68	48,960	+2,350
Mar. 31	4,444.33	52,060	+3,100
Apr. 30	4,444.05	50,700	-1,360
May 31	4,442.56	43,770	-6,930
June 30	4,439.01	28,650	-15,120
July 31	4,437.40	22,500	-6,150
Aug. 31	4,437.80	23,980	+1,480
Sept. 30	-	a28,140	+4,160
WTR YR 1978	-	-	+11,640

a Contents interpolated.

14054000 DESCHUTES RIVER BELOW CRANE PRAIRIE RESERVOIR, NEAR LA PINE, OR

LOCATION.--Lat 43°45'13", long 121°46'57", in SW¼NW¼ sec.16, T.21 S., R.8 E., Deschutes County, Hydrologic Unit 17070301, Deschutes National Forest, on left bank 0.1 mi (0.2 km) downstream from Crane Prairie Dam, 15 mi (24 km) northwest of La Pine, and at mile 238.2 (383.3 km).

DRAINAGE AREA.--254 mi^2 (658 km^2), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--August 1907 to November 1908 and August 1912 to September 1913 (fragmentary), October 1913 to September 1917, February 1922 to current year. Monthly discharge only for some periods, published in WSP 1318. Prior to October 1949, published as "at Crane Prairie, near Lapine." Published as "near Lapine" 1949-64.

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1318: 1929(M).

GAGE.--Water-stage recorder. Datum of gage is 4,419.78 ft (1,347.149 m) National Geodetic Vertical Datum of 1929 (Pacific Power & Light Co. bench mark). Aug. 15, 1907, to Sept. 30, 1917, and Feb. 23 to June 8, 1922, nonrecording gage at site 0.5 mi (0.8 km) upstream at different datums. June 9, 1922, to May 9, 1932, nonrecording gage or water-stage recorder at present site and datum.

REMARKS.--Records good. Flow regulated since 1922 by Crane Prairie Reservoir (see sta 14053500). No diversion above station.

AVERAGE DISCHARGE.--60 years, 213 ft^3/s (6.032 m^3/s), 154,300 acre-ft/yr (190 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft^3/s (33.1 m^3/s) July 28, 1947, gage height, 3.34 ft (1.018 m); minimum, 0.90 ft^3/s (0.026 m^3/s) Mar. 14-21, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 459 ft^3/s (13.0 m^3/s) June 24-26, gage height, 1.97 ft (0.600 m); minimum, 1.6 ft^3/s (0.045 m^3/s) Oct. 25-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	17	3.0	3.4	3.4	49	13	174	332	350	233	106
2	44	17	3.0	3.4	3.4	49	13	174	335	346	233	108
3	34	16	3.0	3.4	3.4	49	13	174	335	346	233	108
4	15	16	3.0	3.4	3.4	49	13	174	335	342	230	108
5	14	16	3.0	3.4	3.8	49	13	174	335	342	230	108
6	14	15	3.0	3.4	3.8	49	13	174	335	309	230	108
7	14	15	3.0	3.4	3.8	49	13	174	408	236	230	108
8	14	13	3.0	3.0	19	49	13	174	451	236	143	108
9	14	8.6	3.0	3.0	50	31	13	174	451	236	102	108
10	13	8.6	3.0	3.0	50	13	13	174	451	239	102	108
11	13	7.8	3.4	3.0	50	13	78	174	447	239	104	108
12	14	7.0	3.4	3.4	50	13	185	174	447	239	104	108
13	14	7.0	3.4	3.4	50	13	185	211	451	239	104	108
14	14	7.0	3.4	3.4	50	13	182	233	447	236	104	108
15	14	6.6	3.4	3.4	50	13	177	233	447	236	104	108
16	14	4.6	3.4	3.4	50	13	177	233	455	236	104	108
17	14	3.4	3.4	3.4	49	13	177	233	455	236	104	108
18	14	3.0	3.4	3.4	49	13	177	233	451	236	104	108
19	14	3.0	3.4	3.4	49	13	177	233	451	236	104	108
20	14	3.0	3.4	3.4	49	13	174	233	451	236	104	108
21	8.6	3.0	3.4	3.4	49	13	171	233	455	236	104	108
22	2.0	3.0	3.4	3.4	49	13	166	233	451	236	104	108
23	2.0	2.8	3.4	3.4	49	13	169	233	455	236	104	108
24	1.8	2.8	3.4	3.4	49	13	174	233	455	239	104	108
25	1.8	2.8	3.4	3.4	49	13	174	295	459	239	104	108
26	1.6	2.8	3.8	3.4	49	13	174	339	455	239	104	108
27	1.6	2.8	3.8	3.4	49	13	174	339	392	239	104	108
28	1.8	2.8	3.8	3.4	49	13	174	335	353	239	106	108
29	1.8	2.8	3.8	3.4	---	13	174	335	353	239	106	108
30	1.8	2.8	3.8	3.4	---	13	174	335	350	236	106	108
31	7.4	---	3.4	3.4	---	13	---	332	---	236	106	---
TOTAL	391.2	223.0	103.4	103.8	1032.0	709	3543	7172	12448	7965	4158	3238
MEAN	12.6	7.43	3.34	3.35	36.9	22.9	118	231	415	257	134	108
MAX	44	17	3.8	3.4	50	49	185	339	459	350	233	108
MIN	1.6	2.8	3.0	3.0	3.4	13	13	174	332	236	102	106
AC-FT	776	442	205	206	2050	1410	7030	14230	24690	15800	8250	6420

CAL YR 1977 TOTAL 36819.40 MEAN 101 MAX 414 MIN .90 AC-FT 73030
WTR YR 1978 TOTAL 41086.40 MEAN 113 MAX 459 MIN 1.6 AC-FT 81490

14054500 BROWN CREEK NEAR LA PINE, OR

LOCATION.--Lat 43°42'57", long 121°48'10", in NE¼SW¼ sec.29, T.21 S., R.8 E., Deschutes County, Hydrologic Unit 17070301, in Deschutes National Forest, on right bank at highway crossing and 15 mi (24 km) northwest of La Pine.

DRAINAGE AREA.--21 mi^2 (54 km^2), approximately, hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--May 1922 to September 1925, July 1938 to current year. Monthly discharge only July 1938 to September 1949, published in WSP 1318. Prior to Oct. 1, 1964, published as "near Lapine."

REVISED RECORDS.--WSP 1448: 1922-24.

GAGE.--Water-stage recorder. Altitude of gage is 4,370 ft (1,332 m), from topographic map. May 24, 1922, to Sept. 30, 1925, nonrecording gage, and July 1, 1938, to Nov. 1, 1945, water-stage recorder, at site 0.4 mi (0.6 km) downstream at different datums. Nov. 2, 1945, to Aug. 25, 1971, water-stage recorder at site 0.8 mi (1.3 km) upstream at datum 4,372.94 ft (1,332.872 m) above mean sea level.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--43 years, 39.1 ft^3/s (1.107 m^3/s), 28,330 acre-ft/yr (34.9 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 104 ft^3/s (2.95 m^3/s) Aug. 4, 1956, gage height, 1.64 ft (0.500 m); maximum gage height, 2.15 ft (0.655 m) Jan. 2, 1974, backwater from ice or debris; minimum discharge, 16 ft^3/s (0.453 m^3/s) July 22-25, 1941, and at times December 1941 to March 1942.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40 ft^3/s (1.13 m^3/s) Dec. 14; maximum gage height, 1.48 ft (0.451 m) Nov. 20, backwater from ice; minimum daily discharge, 24 ft^3/s (0.68 m^3/s) many days November to February.

REVISIONS.--The minimum discharge for the water year 1977 has been revised to minimum daily, 25 ft^3/s (0.71 m^3/s) Sept. 16-26; revised daily discharges, in cubic feet per second, for September 1977 are given below. These figures supersede those published in WDR-OR-77-1.

Sept. 1	26	Sept. 11	26	Sept. 21	25
Sept. 2	26	Sept. 12	26	Sept. 22	25
Sept. 3	26	Sept. 13	26	Sept. 23	25
Sept. 4	26	Sept. 14	26	Sept. 24	25
Sept. 5	26	Sept. 15	26	Sept. 25	25
Sept. 6	26	Sept. 16	25	Sept. 26	25
Sept. 7	26	Sept. 17	25	Sept. 27	26
Sept. 8	26	Sept. 18	25	Sept. 28	28
Sept. 9	26	Sept. 19	25	Sept. 29	27
Sept. 10	26	Sept. 20	25	Sept. 30	26

Month	Total	Mean	Max	Min	Ac-ft
September 1977	772	25.7	28	25	1,530
Wtr Yr 1977	12,777	35.0	51	25	25,340

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	25	24	24	24	26	28	28	26	27	27	30
2	25	24	26	24	25	26	28	28	27	27	27	30
3	25	24	26	24	26	26	28	28	27	27	27	30
4	25	24	24	24	26	26	28	28	27	27	27	30
5	25	24	24	24	26	26	28	28	27	27	27	30
6	25	24	24	24	26	26	29	28	27	27	27	30
7	25	24	24	24	26	26	29	28	27	27	27	30
8	25	24	24	24	26	27	29	28	27	27	28	30
9	25	24	24	24	26	28	28	28	27	27	28	31
10	25	24	24	24	25	27	28	28	27	26	28	31
11	25	24	24	24	25	27	28	28	27	26	28	31
12	25	24	24	24	25	27	28	28	27	26	28	30
13	25	24	30	24	25	27	28	28	27	26	28	30
14	25	24	32	25	25	26	28	28	27	26	28	30
15	25	24	31	26	25	26	28	28	27	26	28	30
16	25	24	26	25	25	27	28	28	27	26	28	30
17	25	24	25	25	25	28	28	27	27	26	28	30
18	25	24	25	25	25	28	28	27	27	26	28	30
19	25	24	25	25	25	28	28	27	27	26	28	30
20	25	24	24	24	25	28	28	27	27	26	28	30
21	25	24	24	24	26	28	28	27	27	26	28	30
22	25	24	24	24	26	28	28	27	27	26	29	30
23	25	24	24	24	26	28	28	27	28	26	29	30
24	25	25	24	24	26	28	28	27	28	26	29	30
25	25	26	24	24	27	28	28	27	27	26	29	30
26	25	27	24	24	26	28	29	27	27	26	29	30
27	25	25	24	24	26	28	29	27	27	26	29	30
28	25	24	24	24	26	28	29	27	27	26	29	30
29	25	25	24	24	---	28	28	27	27	26	29	30
30	25	25	24	24	---	28	29	27	27	26	29	30
31	25	---	24	24	---	28	---	26	---	27	29	---
TOTAL	775	730	774	751	715	844	847	852	811	816	871	903
MEAN	25.0	24.3	25.0	24.2	25.5	27.2	28.2	27.5	27.0	26.3	28.1	30.1
MAX	25	27	32	26	27	28	29	28	28	27	29	31
MIN	25	24	24	24	24	26	28	26	26	26	27	30
AC-FT	1540	1450	1540	1490	1420	1670	1680	1690	1610	1620	1730	1790

CAL YR 1977 TOTAL 10829 MEAN 29.7 MAX 41 MIN 24 AC-FT 21480
WTR YR 1978 TOTAL 9689 MEAN 26.5 MAX 32 MIN 24 AC-FT 19220

14056000 WICKIUP RESERVOIR NEAR LA PINE, OR

LOCATION.--Lat 43°41'02", long 121°41'20", in SW¼NE¼ sec.7, T.22 S., R.9 E., Deschutes County, Hydrologic Unit 17070301, in Deschutes National Forest, in gate-chamber structure at Wickiup Dam on Deschutes River, 9.0 mi (14.5 km) west of La Pine, and at mile 226.8 (364.9 km).

DRAINAGE AREA.--482 mi^2 (1,250 km^2), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--December 1942 to current year. Prior to Oct. 1, 1964, published as "near Lapine."

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Jan. 15, 1945, nonrecording gages at nearby sites at same datum.

REMARKS.--Reservoir is formed by rock-faced, earthfill dam completed in 1949. Some storage began in December 1942, capacity, 182,100 acre-ft (225 hm^3) between elevations 4,265.0 ft (1,299.97 m), no storage, and 4,336.0 ft (1,321.61 m) crest of spillway, with earth plug to elevation 4,339.0 ft (1,322.53 m). Crater Creek Canal diverts water above station to Tumalo Creek basin. Released water is diverted from Deschutes River at Bend for irrigation near Madras.

COOPERATION.--Daily elevations furnished by North Unit Irrigation District, and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 204,000 acre-ft (252 hm^3) Apr. 8, 1974, elevation, 4,338.01 ft (1,322.225 m); minimum observed since reservoir first filled in March 1949, 534 acre-ft (0.66 hm^3), revised on basis of computer expanded capacity table dated June 1970, Oct. 18, 1952, elevation, 4,270.86 ft (1,301.758 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 197,200 acre-ft (243 hm^3) May 2, elevation, 4,337.40 ft (1,322.040 m); minimum observed, 50,910 acre-ft (62.8 hm^3) Oct. 1, elevation, 4,310.95 ft (1,313.978 m).

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	4,310.49	49,800	-
Oct. 31	4,320.17	76,760	+26,960
Nov. 30	4,325.94	101,600	+24,840
Dec. 31	4,329.81	126,600	+25,000
CAL YR 1977	-	-	-31,800
Jan. 31	4,332.58	149,200	+22,600
Feb. 28	4,334.86	170,500	+21,300
Mar. 31	4,336.75	190,100	+19,600
Apr. 30	4,337.35	196,600	+6,500
May 31	4,335.21	174,000	-22,600
June 30	4,331.64	141,100	-32,900
July 31	4,325.89	101,300	-39,800
Aug. 31	4,318.17	70,420	-30,880
Sept. 30	4,312.71	55,240	-15,180
WTR YR 1978	-	-	+5,440

14056500 DESCHUTES RIVER BELOW WICKIUP RESERVOIR, NEAR LA PINE, OR

LOCATION.--Lat 43°41'10", long 121°41'13", in NW¼NE¼ sec.7, T.22 S., R.9 E., Deschutes County, Hydrologic Unit 17070301, on left bank 1,000 ft (305 m) downstream from Wickiup Dam, 9 mi (14 km) west of La Pine, and at mile 226.4 (364.3 km).

DRAINAGE AREA.--483 mi^2 (1,251 km^2), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--June 1938 to current year. Monthly discharge only June 1938, published in WSP 1318. Published as "near Lapine" 1938-64.

REVISED RECORDS.--WSP 1448: 1944(m), 1947-51(m).

GAGE.--Water-stage recorder. Datum of gage is 4,257.41 ft (1,297.659 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Records good. Flow regulated by Crane Prairie Reservoir (see station 14053500), and since 1942 by Wickiup Reservoir (see station 14056500). Some leakage from Crane Prairie and Wickiup Reservoirs does not pass station. Some spill bypassed station in 1955. Crater Creek canal diverts water above station to Tumalo Creek basin.

AVERAGE DISCHARGE.--40 years, 748 ft^3/s (21.18 m^3/s), 541,900 acre-ft/yr (o68 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,280 ft^3/s (64.6 m^3/s) July 28 to Aug. 1, 1956, July 31, Aug. 1, 2, 1962; minimum, 1.9 ft^3/s (0.054 m^3/s) Nov. 10, 1973; minimum daily, 10 ft^3/s (0.28 m^3/s) Jan. 17, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,870 ft^3/s (53.0 m^3/s) July 16, 17; maximum gage height, 6.58 ft (2.006 m) July 16; minimum discharge, 5.8 ft^3/s (0.16 m^3/s) Oct. 10, result of regulation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	35	26	30	21	25	31	416	1060	1140	1690	1060
2	85	35	26	29	22	25	31	512	1230	1120	1680	1050
3	176	35	25	29	22	25	31	571	1300	903	1680	1070
4	220	35	24	27	21	26	31	616	1320	788	1670	1080
5	108	36	24	27	20	26	31	630	1460	788	1670	1070
6	61	36	24	27	20	26	32	658	1600	977	1660	1210
7	51	36	23	29	20	26	32	676	1610	1260	1660	1230
8	37	37	24	29	20	26	32	844	1710	1290	1660	1200
9	37	37	24	30	20	27	32	1040	1720	1320	1650	1180
10	28	31	23	29	20	27	32	1110	1550	1410	1630	1150
11	37	27	21	27	21	27	169	1100	1520	1430	1550	1070
12	31	26	21	27	21	27	416	1060	1540	1480	1550	996
13	26	25	22	29	21	27	530	1020	1490	1570	1530	921
14	26	26	23	29	21	27	623	1020	1480	1700	1400	868
15	25	27	23	30	21	27	637	984	1480	1780	1310	868
16	26	29	23	30	21	27	683	900	1480	1860	1220	819
17	26	25	24	29	21	27	679	875	1480	1870	1220	739
18	27	22	24	29	21	27	683	921	1490	1790	1210	795
19	29	21	23	29	22	27	676	977	1600	1680	1210	823
20	29	22	23	29	23	27	679	984	1590	1680	1200	900
21	29	22	23	29	23	27	669	1020	1600	1610	1170	935
22	324	22	24	29	23	29	634	1130	1600	1560	1080	1010
23	365	22	24	30	24	29	670	1230	1470	1560	1080	1120
24	392	23	24	30	24	29	627	1240	1170	1630	1070	1160
25	407	22	24	30	24	29	578	1240	1070	1700	1040	1220
26	407	22	25	30	24	29	240	1180	959	1720	1020	1310
27	231	23	25	30	24	29	243	1120	973	1710	1010	1330
28	32	24	26	30	24	30	275	1120	1090	1710	1010	1340
29	36	26	27	31	---	30	313	1120	1140	1700	1040	988
30	36	26	29	27	---	31	380	1100	1140	1700	1060	889
31	35	---	29	22	---	31	---	1030	---	1700	1060	---
TOTAL	3462	835	750	892	609	852	10679	29444	41922	46136	41690	31401
MEAN	112	27.8	24.2	28.8	21.8	27.5	356	950	1397	1488	1345	1047
MAX	407	37	29	31	24	31	683	1240	1720	1870	1690	1340
MIN	25	21	21	22	20	25	31	416	959	788	1010	739
AC-FT	6870	1660	1490	1770	1210	1690	21180	58400	83150	91510	82690	62280

CAL YR 1977 TOTAL 239295 MEAN 656 MAX 1650 MIN 21 AC-FT 474600
WTR YR 1978 TOTAL 208672 MEAN 572 MAX 1870 MIN 20 AC-FT 413900

14057500 FALL RIVER NEAR LA PINE, OR

LOCATION.--Lat 43°47'48", long 121°34'18", in NW¼SE¼ sec.31, T.20 S., R.10 E., Deschutes County, Hydrologic Unit 17070301, on left bank 50 ft (15 m) downstream from pond spillway at State fish hatchery, 9 mi (14 km) northeast of La Pine, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--45.1 mi^2 (116.8 km^2), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--July 1938 to current year. Records for May to September 1912 at site 3 mi (4.8 km) downstream not equivalent owing to difference in drainage area. Prior to Oct. 1, 1964, published as "near Lapine."

REVISED RECORDS.--WSP 984: 1938-42(M,m).

GAGE.--Water-stage recorder. Altitude of gage is 4,220 ft (1,286 m), by barometer.

REMARKS.--Records good. Diversion only to ponds at fish hatchery 50 ft (15 m) above station, from which water returns to river above station. Stream is spring fed and momentary extremes are caused by operation of fish hatchery.

AVERAGE DISCHARGE.--40 years, 153 ft^3/s (4.333 m^3/s), 110,800 acre-ft/yr (137 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 254 ft^3/s (7.19 m^3/s) June 5, 1965, gage height, 2.02 ft (0.616 m); minimum, 67 ft^3/s (1.90 m^3/s) sometime during period Sept. 20-30, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 169 ft^3/s (4.79 m^3/s) May 8, gage height, 1.47 ft (0.448 m); minimum, 112 ft^3/s (3.17 m^3/s) on many days (result of fish hatchery diversion).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137	130	127	122	122	124	129	129	132	132	129	124
2	137	129	129	124	122	124	129	130	132	132	129	124
3	137	129	129	124	124	124	129	130	132	132	127	124
4	137	129	127	124	122	124	129	130	132	130	127	122
5	137	129	127	124	122	124	129	130	132	130	127	124
6	137	129	127	124	122	124	129	130	132	130	127	124
7	137	129	127	122	124	124	129	130	132	132	126	122
8	135	127	127	122	124	124	129	130	134	130	126	122
9	135	127	127	124	124	124	129	130	134	129	126	124
10	135	127	127	122	124	124	129	130	134	129	126	124
11	135	127	127	122	124	124	127	130	134	129	126	124
12	134	127	127	122	124	124	127	130	132	130	126	122
13	134	127	129	122	124	124	127	130	134	129	126	122
14	134	127	132	122	124	124	129	130	134	130	126	122
15	132	127	130	122	124	126	129	130	134	129	126	122
16	132	127	129	122	122	126	129	130	134	129	126	122
17	132	126	129	122	124	126	129	130	134	129	126	122
18	132	126	127	122	124	126	129	130	134	129	126	122
19	132	126	126	122	124	126	129	130	134	129	126	122
20	132	126	126	122	124	126	129	130	134	130	126	122
21	132	127	126	122	122	126	129	130	134	130	126	122
22	132	129	126	122	122	127	129	130	134	130	126	122
23	132	129	126	121	122	127	129	130	134	130	124	122
24	132	129	124	121	124	127	129	130	134	130	124	122
25	132	130	124	121	124	127	130	130	134	130	126	122
26	132	127	124	121	124	127	130	130	132	130	124	122
27	130	127	124	121	124	127	129	130	132	129	124	122
28	130	126	122	121	124	127	129	132	134	129	124	122
29	130	127	122	121	---	127	129	132	132	129	124	121
30	130	126	124	121	---	127	130	132	132	129	124	121
31	130	---	124	121	---	129	---	132	---	129	124	---
TOTAL	4135	3828	3922	3785	3454	3890	3867	4037	3996	4024	3900	3674
MEAN	133	128	127	122	123	125	129	130	133	130	126	122
MAX	137	130	132	124	124	129	130	132	134	132	129	124
MIN	130	126	122	121	122	124	127	129	132	129	124	121
AC-FT	8200	7590	7780	7510	6850	7720	7670	8010	7930	7980	7740	7290

CAL YR 1977 TOTAL 52608 MEAN 144 MAX 164 MIN 122 AC-FT 104300
WTR YR 1978 TOTAL 46512 MEAN 127 MAX 137 MIN 121 AC-FT 92260

14059500 CRESCENT LAKE NEAR CRESCENT, OR

LOCATION.--Lat 43°30'05", long 121°58'20", in SW¼ sec.11, T.24 S., R.6 E., Klamath County, Hydrologic Unit 17070302, Deschutes National Forest, on outlet works at dam on Crescent Creek, 0.8 mi (1.3 km) south of town of Crescent Lake, 14.0 mi (22.5 km) west of Crescent, and at mile 30.0 (48.3 km).

DRAINAGE AREA.--60.7 mi² (157 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--August 1922 to current year.

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1318: 1922-31. WSP 1448: 1923-31(M,m).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Oct. 1, 1956, nonrecording gage at nearby site at datum 4,825.16 ft (1,470.709 m), National Geodetic Vertical Datum of 1929. Oct. 1, 1956, to Sept. 12, 1966, nonrecording gage, at present site and datum.

REMARKS.--Reservoir originally formed by dam of earth and logs completed in 1922, reconstructed as earthfill dam in 1956. Capacity, 117,200 acre-ft (145 hm³) between elevations 4,821.5 ft (1,469.59 m), sill of outlet gate and 4,853.0 ft (1,479.19 m), crest of spillway. Maximum allowable storage, 86,050 acre-ft (106 hm³) elevation, 4,845.32 ft (1,476.854 m). Dead storage about 500,000 acre-ft (616 hm³) Oregon Game Commission survey. Records given herein represent usable contents. Water surface probably cannot be lowered below elevation 4,823.4 ft (1,470.17 m) owing to natural flow through reservoir. Released water is diverted from Deschutes River at Bend for irrigation near Tumalo.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 93,010 acre-ft (115 hm³) June 6, 1975, elevation, 4,847.09 ft (1,477.393 m); minimum observed, 9,640 acre-ft (11.9 hm³) Oct. 21, 1931, elevation, 4,827.91 ft (1,471.547 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 55,590 acre-ft (68.5 hm³) May 22, elevation, 4,837.41 ft (1,474.443 m); minimum, 34,270 acre-ft (42.3 hm³) Oct. 1, elevation, 4,831.66 ft (1,472.690 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	4,831.66	34,270	-
Oct. 31	4,831.99	35,460	+1,190
Nov. 30	4,833.36	40,490	+5,030
Dec. 31	4,835.89	49,870	+9,380
CAL YR 1977	-	-	-16,630
Jan. 31	4,836.37	51,670	+1,800
Feb. 28	4,836.69	52,880	+1,210
Mar. 31	4,836.88	53,600	+720
Apr. 30	4,837.24	54,940	+1,340
May 31	4,837.05	54,220	-720
June 30	4,836.33	51,510	-2,710
July 31	4,833.78	42,030	-9,480
Aug. 31	4,831.87	35,030	-7,000
Sept. 30	4,831.83	34,890	-140
WTR YR 1978	-	-	+620

14060000 CRESCENT CREEK AT CRESCENT LAKE, NEAR CRESCENT, OR

LOCATION.--Lat 43°30'11", long 121°58'20", in SE¼SW¼ sec.11, T.24 S., R.6 E., Klamath County, Hydrologic Unit 17070302, Deschutes National Forest, on left bank 400 ft (122 m) downstream from Crescent Lake Dam, 0.5 mi (0.8 km) south of town of Crescent Lake, 14 mi (23 km) west of Crescent, and at mile 29.9 (48.1 km).

DRAINAGE AREA.--60.7 mi^2 (157.2 km^2), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--January to September 1911 (gage heights and discharge measurements only), January 1912 to July 1915, July to September 1927, May 1928 to current year. Published as Crescent Lake outlet near Crescent January 1911 to September 1912, and as Crescent Creek at outlet of Crescent Lake, near Crescent October 1913 to July 1915.

REVISED RECORDS.--WSP 1218: Drainage area.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 4,819.96 ft (1,469.124 m) National Geodetic Vertical Datum of 1929. See WSP 1935 for history of changes prior to Sept. 11, 1956.

REMARKS.--Records good. Flow regulated since 1922 by Crescent Lake (see station 14059500). No diversion above station.

AVERAGE DISCHARGE.--52 years (water years 1913-14, 1929-78), 58.4 ft^3/s (1.654 m^3/s), 42,310 acre-ft/yr (52.2 hm^{3}yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 313 ft^3/s (8.86 m^3/s) July 9, 1929, Aug. 9, 1936; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 214 ft^3/s (6.06 m^3/s) July 6, gage height, 2.40 ft (0.732 m); no flow Oct. 1, 2, Mar. 16 to May 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	4.3	.80	.60	.40	.40	.00	.00	88	88	169	44
2	.00	4.3	.80	.60	.20	.40	.00	.00	88	88	167	44
3	1.8	4.3	.80	.60	.20	.40	.00	.00	88	88	165	44
4	3.8	4.3	.80	.60	.20	.40	.00	.00	88	88	163	44
5	3.8	4.3	.80	.60	.20	.40	.00	.00	88	87	162	44
6	3.8	4.3	.80	.60	.20	.40	.00	.00	88	134	159	44
7	3.8	4.3	.80	.60	.20	.40	.00	.00	87	202	158	44
8	3.8	4.3	.80	.40	.20	.40	.00	.00	87	200	156	44
9	3.8	4.3	.80	.40	.20	.40	.00	.00	87	199	155	44
10	3.8	4.3	.80	.40	.40	.40	.00	.00	87	198	152	44
11	3.8	4.3	.80	.40	.40	.20	.00	.00	87	197	151	44
12	3.8	4.3	.80	.40	.40	.20	.00	17	88	196	147	44
13	3.8	4.3	.80	.40	.40	.20	.00	48	88	196	146	44
14	3.8	4.3	.80	.40	.40	.20	.00	48	88	195	144	44
15	3.8	4.3	.80	.40	.40	.20	.00	48	88	194	143	22
16	4.0	4.3	.80	.40	.40	.00	.00	48	87	193	140	4.3
17	4.0	4.3	.80	.40	.40	.00	.00	48	87	192	139	4.3
18	4.0	4.3	.80	.40	.40	.00	.00	48	87	191	137	4.3
19	4.0	4.3	.80	.40	.40	.00	.00	48	87	190	135	4.3
20	4.0	4.3	.80	.40	.40	.00	.00	48	87	189	133	4.3
21	4.3	4.3	.80	.40	.40	.00	.00	48	87	189	132	4.5
22	4.3	4.3	.60	.40	.40	.00	.00	66	87	188	130	4.5
23	4.3	4.3	.60	.40	.40	.00	.00	91	87	187	88	4.5
24	4.3	4.3	.60	.40	.40	.00	.00	91	87	186	44	4.5
25	4.3	4.3	.60	.40	.40	.00	.00	90	87	185	44	4.5
26	4.3	4.3	.60	.40	.40	.00	.00	89	87	183	44	4.5
27	4.3	4.3	.60	.40	.40	.00	.00	89	87	181	45	4.5
28	4.3	4.3	.60	.40	.40	.00	.00	89	87	178	45	4.5
29	4.3	4.3	.60	.40	---	.00	.00	89	88	176	45	4.3
30	4.3	2.6	.60	.40	---	.00	.00	89	88	174	44	4.3
31	4.3	---	.60	.40	---	.00	---	89	---	170	44	---
TOTAL	114.70	127.3	22.80	13.80	9.60	5.00	.00	1321.00	2622	5302	3726	704.1
MEAN	3.70	4.24	.74	.45	.34	.16	.000	42.6	87.4	171	120	23.5
MAX	4.3	4.3	.80	.60	.40	.40	.00	91	88	202	169	44
MIN	.00	2.6	.60	.40	.20	.00	.00	.00	87	87	44	4.3
AC-FT	226	252	45	27	19	9.9	.00	2620	5200	10520	7390	1400

CAL YR 1977 TOTAL 22614.00 MEAN 62.0 MAX 208 MIN .00 AC-FT 44850
WTR YR 1978 TOTAL 13968.30 MEAN 38.3 MAX 202 MIN .00 AC-FT 27710

14063000 LITTLE DESCHUTES RIVER NEAR LA PINE, OR

LOCATION.--Lat 43°41'21", long 121°30'06", in SW¼SW¼ sec.2, T.22 S., R.10 E., Deschutes County, Hydrologic Unit 17070302, on right bank 10 ft (3 m) downstream from highway bridge at former town of Rosland, 1.1 mi (1.8 km) north of La Pine, and at mile 26.8 (43.1 km).

DRAINAGE AREA.--859 mi^2 (2,225 km^2), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--September 1910 to January 1911, March, April, August 1911, March to September 1912, June to October 1913, June to November 1918, August to October 1920, May 1924 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as Deschutes River near Lapine 1910-12, as East Fork Deschutes River near Lapine 1913-20, and as Little Deschutes River near Lapine 1924-64.

REVISED RECORDS.--WSP 1218: 1950.

GAGE.--Water-stage recorder. Datum of gage is 4,192.81 ft (1,277.968 m) National Geodetic Vertical Datum of 1929. Sept. 1, 1910, to Aug. 31, 1911, nonrecording gage at present site at different datum. Mar. 1 to Sept. 30, 1912, nonrecording gage at site 1.2 mi (1.9 km) downstream at different datum. June 1, 1913, to Sept. 28, 1928, nonrecording gage and Sept. 29, 1928, to Sept. 30, 1931, water-stage recorder at present site at different datums.

REMARKS.--Records good except those for August and September, which are fair. Flow regulated since 1922 by Crescent Lake (see station 14063000). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--54 years (water years 1925-78), 206 ft^3/s (5.834 m^3/s), 149,200 acre-ft/yr (184 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,660 ft^3/s (104 m^3/s) Dec. 25, 1964, gage height, 8.18 ft (2.493 m); minimum, 8 ft^3/s (0.227 m^3/s) Sept. 2, 3, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 663 ft^3/s (18.8 m^3/s) Dec. 17, gage height, 6.46 ft (1.969 m); minimum, 31 ft^3/s (0.88 m^3/s) Nov. 19, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	57	391	190	142	146	243	156	204	195	176	88
2	57	53	297	185	141	139	256	153	203	189	174	83
3	52	50	290	180	164	139	264	149	197	195	174	94
4	48	50	317	178	200	138	275	147	194	193	174	86
5	44	50	308	178	217	142	274	147	193	181	170	84
6	45	48	297	178	205	150	272	142	195	172	170	95
7	44	47	289	180	215	154	273	137	199	167	170	109
8	43	45	293	184	221	165	261	135	202	217	170	112
9	42	43	254	189	210	195	245	133	206	234	168	113
10	41	41	225	198	186	204	231	134	212	221	165	118
11	41	40	222	209	163	193	225	136	215	208	161	126
12	39	39	239	192	161	182	213	141	216	207	160	134
13	39	40	263	185	155	168	206	149	212	197	162	130
14	38	45	363	199	152	158	197	172	207	202	167	136
15	38	53	520	230	152	152	194	180	198	214	168	124
16	38	53	600	260	141	147	193	187	192	213	168	116
17	37	53	640	257	123	149	194	199	185	213	168	88
18	37	53	620	252	151	160	201	195	181	213	165	68
19	37	46	520	231	155	169	194	187	177	209	164	64
20	36	41	440	206	149	177	183	183	170	205	168	63
21	36	43	370	192	152	188	187	183	172	197	178	62
22	36	53	340	183	155	191	185	185	174	195	169	61
23	36	67	310	171	156	200	189	195	174	192	177	59
24	36	77	275	155	160	212	190	227	187	189	174	57
25	40	111	260	155	163	223	192	241	200	190	145	51
26	43	228	235	157	166	218	205	247	196	200	111	49
27	49	367	220	156	161	216	196	241	193	222	101	48
28	50	463	215	153	154	217	178	233	205	209	95	48
29	49	502	210	150	---	221	167	225	192	186	91	48
30	51	491	200	150	---	225	160	214	196	182	86	48
31	57	---	195	146	---	232	---	205	---	180	89	---
TOTAL	1344	3349	10218	5829	4670	5570	6443	5558	5847	6187	4778	2562
MEAN	43.4	112	330	188	167	180	215	179	195	200	154	85.4
MAX	65	502	640	260	221	232	275	247	216	234	178	136
MIN	36	39	195	146	123	138	160	133	170	167	86	48
AC-FT	2670	6640	20270	11560	9260	11050	12780	11020	11600	12270	9480	5080

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CAL YR 1977   TOTAL   46878    MEAN 128    MAX 640    MIN 34    AC-FT    92980
WTR YR 1978   TOTAL   62355    MEAN 171    MAX 640    MIN 36    AC-FT   123700
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14064500 DESCHUTES RIVER AT BENHAM FALLS, NEAR BEND, OR

LOCATION.--Lat 43°55'49", long 121°24'39", in SW¼NE¼ sec.16, T.19 S., R.11 E., Deschutes County, Hydrologic Unit 17070301, Deschutes National Forest, on right bank 0.5 mi (0.8 km) upstream from Benham Falls, 10 mi (16 km) southwest of Bend, and at mile 181.4 (291.9 km).

DRAINAGE AREA.--1,759 mi² (4,556 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1906 to September 1913, April to September 1914, August to December 1920, April to September 1921, February 1924 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as "at West's ranch, near Lava" April 1906 to February 1909, April to September 1914. Records for January 1905 to March 1906 and October 1913 to September 1914, published under present name in WSP 370 and 394, have been found to be unreliable and should not be used.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 4,142.10 ft (1,262.512 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). See WSP 1738 for history of changes prior to Nov. 20, 1958.

REMARKS.--Water discharge records good. Flow regulated by Crane Prairie Reservoir, Crescent Lake, and Wickiup Reservoir (see elsewhere in this report). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--61 years (water years 1907-13, 1925-78), 1,420 ft³/s (40.21 m³/s), 1,029,000 acre-ft/yr (1.27 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s (142 m³/s), estimated, Nov. 27, 1909 (gage height not determined); minimum, 363 ft³/s (10.3 m³/s) Jan. 20, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,430 ft³/s (68.8 m³/s) July 18, 19; gage height, 5.89 ft (1.795 m); minimum, 466 ft³/s (13.2 m³/s) Nov. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	690	585	986	669	630	658	760	1010	1720	1770	2260	1610
2	669	585	1000	648	630	658	772	1040	1730	1770	2250	1600
3	658	585	928	658	658	655	784	1130	1870	1770	2250	1600
4	676	581	852	700	669	655	788	1180	1940	1580	2240	1610
5	752	581	844	728	686	665	796	1220	1970	1440	2240	1630
6	716	581	852	736	712	669	804	1240	2060	1430	2230	1630
7	627	578	832	724	716	672	804	1260	2190	1590	2230	1710
8	623	574	816	720	728	679	800	1280	2240	1830	2230	1780
9	606	574	820	724	724	693	788	1470	2300	1860	2220	1760
10	595	574	780	720	708	712	776	1630	2370	1940	2210	1750
11	595	571	760	716	679	732	756	1700	2280	2020	2190	1730
12	585	564	800	720	641	720	788	1690	2210	2040	2140	1670
13	585	560	880	712	644	708	1050	1660	2210	2100	2120	1610
14	578	564	970	712	651	693	1170	1640	2190	2120	2110	1560
15	574	560	1070	724	651	683	1260	1660	2150	2220	2040	1490
16	571	567	1100	740	648	676	1270	1630	2140	2320	1950	1470
17	571	571	1130	772	641	669	1310	1560	2130	2400	1860	1430
18	571	574	1130	772	630	669	1320	1540	2130	2430	1830	1340
19	567	564	1140	764	648	676	1330	1590	2130	2420	1820	1340
20	567	508	1080	744	662	686	1330	1640	2190	2320	1810	1360
21	564	557	1150	712	658	690	1320	1640	2210	2280	1810	1420
22	564	553	1120	690	655	704	1310	1660	2210	2240	1800	1460
23	662	574	1030	672	662	716	1280	1760	2220	2160	1710	1510
24	788	602	964	637	665	724	1280	1870	2160	2150	1710	1600
25	820	648	923	634	669	728	1290	1920	1870	2170	1710	1650
26	836	683	896	630	669	744	1280	1940	1750	2250	1670	1690
27	840	686	844	637	672	744	1020	1890	1630	2290	1610	1770
28	796	752	812	641	669	744	928	1830	1630	2290	1590	1800
29	609	848	824	634	---	744	928	1820	1730	2290	1580	1810
30	592	941	788	634	---	748	959	1810	1770	2280	1600	1590
31	585	---	740	637	---	752	---	1790	---	2270	1610	---
TOTAL	20032	18245	28861	21561	18675	21666	31051	48700	61330	64040	60630	47980
MEAN	646	608	931	696	667	699	1035	1571	2044	2066	1956	1599
MAX	840	941	1150	772	728	752	1330	1940	2370	2430	2260	1810
MIN	564	508	740	630	630	655	756	1010	1630	1430	1580	1340
AC-FT	39730	36190	57250	42770	37040	42970	61590	96600	121600	127000	120300	95170

CAL YR 1977 TOTAL 471068 MEAN 1291 MAX 2310 MIN 508 AC-FT 934400
WTR YR 1978 TOTAL 442771 MEAN 1213 MAX 2430 MIN 508 AC-FT 878200

14064500 DESCHUTES RIVER AT BENHAM FALLS, NEAR BEND, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: November 1967 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: Maximum, 17.0°C on several days in 1968, 1971, and 1974; minimum, 0.0°C Jan. 23, 26, 1969, Jan. 9, 10, 1973, Feb. 5-8, 1976.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum, 16.5°C July 14, 15; minimum recorded, 1.5°C Dec. 22.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.0	8.5	6.5	6.0	4.0	3.5	3.0	2.0	4.0	4.0	4.5	4.0
2	9.0	8.0	6.5	6.0	4.5	4.0	3.0	2.0	4.0	3.5	4.5	3.0
3	9.0	8.5	6.5	5.5	4.5	4.5	3.0	2.0	4.0	3.5	3.5	3.0
4	9.0	8.0	6.5	5.5	4.5	4.5	3.5	3.0	4.0	4.0	3.5	3.0
5	8.5	8.0	5.5	5.5	4.5	4.5	3.0	3.0	4.0	4.0	4.0	3.0
6	8.5	8.0	5.5	5.5	4.5	4.5	3.5	3.0	4.0	4.0	5.0	4.0
7	8.0	7.0	5.5	5.5	4.5	4.0	3.5	3.0	4.0	4.0	5.5	4.5
8	8.0	6.5	5.5	5.5	4.0	3.5	3.5	3.5	4.0	3.5	5.5	5.5
9	8.5	7.0	5.5	5.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	5.5
10	8.5	7.0	5.5	5.0	---	---	3.5	3.0	3.5	3.0	6.0	5.5
11	8.5	7.0	5.5	5.5	---	---	3.5	3.0	3.0	2.0	6.0	5.0
12	9.0	8.0	5.5	5.5	---	---	3.5	3.0	3.0	2.0	5.0	4.5
13	9.0	8.0	5.5	5.5	---	---	3.5	3.5	3.0	2.0	5.0	4.0
14	9.0	8.0	5.5	5.5	---	---	3.5	3.0	3.0	3.0	5.0	4.0
15	9.0	8.0	6.0	5.5	---	---	3.5	3.0	4.0	3.0	5.0	4.0
16	9.0	8.0	6.0	5.5	---	---	3.5	3.0	4.0	3.5	5.5	4.5
17	9.0	8.0	5.5	5.5	---	---	3.5	3.0	3.5	3.0	6.5	5.5
18	9.0	8.0	5.5	4.5	---	---	3.5	3.5	4.0	3.5	7.0	6.0
19	9.0	8.0	4.5	4.5	---	---	3.5	3.5	5.0	4.0	7.0	6.0
20	8.5	8.0	4.5	3.5	---	---	3.5	3.5	5.0	4.5	8.0	6.5
21	8.0	7.0	4.0	3.0	---	---	3.5	3.5	5.5	5.0	8.0	6.5
22	8.0	6.5	3.5	3.0	2.0	1.5	3.5	3.0	6.0	5.5	8.0	6.5
23	8.0	6.5	3.5	3.5	2.0	2.0	3.0	2.0	6.0	5.5	8.0	7.0
24	8.0	7.0	4.0	3.5	3.0	2.0	3.0	2.0	5.5	5.5	7.0	6.0
25	8.0	8.0	4.5	4.0	3.5	3.0	3.0	3.0	5.5	5.5	8.0	6.0
26	8.0	7.0	4.5	3.5	3.5	3.0	3.5	3.0	5.5	5.0	8.0	6.5
27	7.0	6.5	4.5	4.5	3.0	2.0	4.0	3.5	5.0	4.5	8.5	7.0
28	7.0	6.5	4.5	3.5	3.0	2.0	4.0	3.5	5.0	4.0	9.0	8.0
29	6.5	6.5	4.5	4.5	3.0	3.0	4.0	3.5	---	---	9.0	8.0
30	6.5	6.0	4.5	3.5	3.0	3.0	4.0	4.0	---	---	8.5	8.5
31	6.5	5.5	---	---	3.0	3.0	4.0	4.0	---	---	8.5	8.5
MONTH	9.0	5.5	6.5	3.0	4.5	1.5	4.0	2.0	6.0	2.0	9.0	3.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	7.0	11.5	10.0	13.5	12.0	15.5	15.0	15.5	15.0	13.0	11.5
2	7.0	6.0	12.0	11.0	14.0	12.0	15.5	14.5	16.0	15.0	13.0	12.0
3	6.0	6.0	12.0	11.0	14.5	13.5	14.5	13.5	16.0	15.5	13.0	12.0
4	6.5	6.0	11.5	10.5	14.5	13.5	13.5	12.0	16.0	15.5	13.0	12.0
5	6.5	6.0	10.5	10.0	15.0	14.0	15.5	13.5	15.5	15.0	12.0	11.0
6	6.0	5.5	11.0	10.0	15.0	14.5	15.5	14.0	16.0	15.5	11.0	10.5
7	6.5	5.5	12.0	10.5	14.5	14.5	15.5	15.0	16.0	15.0	11.0	10.5
8	7.0	6.0	12.0	11.0	14.5	14.5	15.0	13.5	16.0	15.0	10.5	10.0
9	8.5	6.0	12.0	11.5	14.5	13.5	16.0	15.0	16.0	15.5	10.0	10.0
10	9.5	6.0	11.5	10.5	13.5	13.0	15.5	14.5	16.0	15.5	10.5	10.0
11	9.5	8.5	11.5	10.5	14.0	13.5	15.5	15.0	15.5	15.0	11.0	10.5
12	10.0	9.0	11.0	10.5	14.0	14.0	15.5	15.0	15.5	14.5	11.0	10.5
13	10.0	9.0	11.0	10.0	14.0	13.5	15.5	15.0	14.5	14.0	11.0	11.0
14	9.0	8.0	11.5	11.0	14.0	13.5	16.5	15.5	14.5	14.0	11.0	10.0
15	8.0	7.0	11.0	10.5	13.5	13.0	16.5	15.5	14.5	14.5	11.0	10.5
16	8.0	7.0	12.0	10.5	14.0	13.0	16.0	15.0	14.0	13.0	11.0	10.5
17	8.0	7.0	13.0	11.0	15.0	14.0	15.0	14.5	14.0	13.5	11.0	10.0
18	8.5	8.0	13.0	11.5	15.5	15.0	15.0	15.0	14.5	14.0	10.0	9.5
19	8.5	8.5	13.0	12.0	15.0	14.0	15.5	15.0	14.5	14.0	10.0	9.0
20	9.0	8.5	13.0	12.0	15.5	14.5	15.5	15.0	14.5	14.0	10.0	9.0
21	9.5	9.0	13.0	11.5	15.5	15.0	15.5	15.0	14.0	13.0	10.0	10.0
22	10.0	9.5	13.0	11.5	15.5	14.5	15.5	15.0	13.5	13.0	10.0	9.5
23	10.0	9.5	12.0	11.0	14.5	14.0	16.0	15.0	13.0	12.0	11.0	10.0
24	10.0	10.0	11.5	10.5	14.0	13.5	16.0	15.0	12.0	12.0	11.0	10.5
25	10.0	10.0	11.0	10.5	13.5	13.5	16.0	15.0	13.0	12.0	11.0	10.5
26	10.0	9.5	11.0	11.0	15.0	13.5	15.5	15.0	13.0	12.0	10.5	9.5
27	10.5	9.5	12.0	11.0	15.5	14.0	15.0	14.5	13.5	12.0	10.0	10.0
28	11.0	10.0	13.5	11.5	15.5	15.0	15.5	15.0	13.5	12.0	10.0	9.5
29	11.5	10.5	13.5	12.0	15.0	14.5	16.0	15.0	13.5	13.0	10.0	9.5
30	11.5	11.0	13.5	12.0	15.0	14.5	16.0	15.0	14.0	13.0	10.0	9.5
31	---	---	13.5	12.0	---	---	16.0	15.0	13.0	12.0	---	---
MONTH	11.5	5.5	13.5	10.0	15.5	12.0	16.5	12.0	16.0	12.0	13.0	9.0

DIVERSIONS FROM DESCHUTES RIVER NEAR BEND, OR

The following six canals, all in Deschutes County, Hydrologic Unit 17070301, are the only diversions from Deschutes River between gaging stations at Benham Falls and below Bend.

14065500 ARNOLD CANAL NEAR BEND diverts at mile 174.5 (280.8 km) from right bank at head of Lava Island, in SW¼ sec.27, T.18 S., R.11 E.; water used for irrigation southeast of Bend. Records available, October 1912 to current year.

14066500 CENTRAL OREGON CANAL ABOVE PILOT BUTTE CANAL, NEAR BEND diverts at mile 169.5 (272.7 km) from right bank in NE¼ sec.13, T.18 S., R.11 E.; water used for irrigation east of Bend. Beginning Oct. 1, 1932, record obtained upstream from intake of Pilot Butte Canal. Records available, October 1932 to current year.

14068500 DESCHUTES COUNTY MUNICIPAL IMPROVEMENT DISTRICT CANAL AT BEND diverts at mile 165.8 (266.8 km) from left bank in SW¼SE¼ sec.29, T.17 S., R.12 E., at Bend; water stored in Crescent Lake for Tumalo project is diverted by this canal and supplements flow in Tumalo project feed canal for irrigation near Tumalo. Records available, May 1923 to current year.

14069000 NORTH UNIT MAIN CANAL NEAR BEND diverts at mile 164.8 (265.2 km) from right bank in NE¼ sec.29, T.17 S., R.12 E.; water used for irrigation near Madras. Records available, October 1945 to current year.

14069500 NORTH CANAL NEAR BEND diverts at mile 164.8 (265.2 km) from right bank in NE¼ sec.29, T.17 S., R.12 E.; water used for irrigation north of Bend, mostly near Redmond. Records available, June 1913 to current year.

14070000 SWALLEY CANAL NEAR BEND diverts at mile 164.8 (265.2 km) from right bank in NE¼ sec.29, T.17 S., R.12 E.; water used for irrigation north of Bend. Records available, 1913 to current year.

Records of monthly discharge of these canals, published as a group, are available from October 1926 to current year; records for each canal published separately prior to 1926.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	ARNOLD CANAL	CENTRAL OREGON CANAL	DESCHUTES COUNTY MUNICIPAL IMPROVEMENT DISTRICT CANAL	NORTH UNIT MAIN CANAL	NORTH CANAL	SWALLEY CANAL	TOTAL
OCTOBER................	502	3,660	0	19,170	797	3,440	27,570
NOVEMBER...............	510	1,320	0	0	2,590	613	5,030
DECEMBER...............	244	3,440	0	0	2,880	583	7,150
JANUARY................	347	3,040	0	0	2,370	593	6,350
FEBRUARY...............	313	2,130	0	0	1,810	478	4,730
MARCH..................	601	2,110	0	0	1,860	470	5,040
APRIL..................	1,050	10,330	0	12,540	11,270	2,970	38,160
MAY....................	5,270	25,720	3,490	20,820	26,300	5,710	87,310
JUNE...................	5,720	31,290	4,610	35,170	29,720	7,010	113,520
JULY...................	7,020	31,330	6,870	35,360	31,200	6,320	118,100
AUGUST.................	7,050	32,310	8,360	25,190	31,730	7,210	111,850
SEPTEMBER..............	5,900	25,080	4,570	21,330	25,580	5,330	87,790
WTR YR 1978.........	34,530	171,800	27,900	169,600	168,100	40,730	612,600

14070500 DESCHUTES RIVER BELOW BEND, OR

LOCATION.--Lat 44°04'59", long 121°18'24", in SE¼SE¼ sec.20, T.17 S., R.12 E., Deschutes County, Hydrologic Unit 17070301, on right bank 0.4 mi (0.6 km) downstream from North Canal, 0.5 mi (0.8 km) north of Bend city limits, and at mile 164.4 (264.5 km).

DRAINAGE AREA.--1,899 mi^2 (4,918 km^2).

PERIOD OF RECORD.--October 1914 to current year.

REVISED RECORDS.--WSP 1318: 1916-18(M), 1926(M), 1931(M).

GAGE.--Water-stage recorder. Datum of gage is 3,503.96 ft (1,068.007 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1931, water-stage recorder at site 200 ft (61 m) downstream at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good. Flow regulated by powerplant at Bend, Crescent Lake, Crane Prairie Reservoir, and Wickiup Reservoir (see elsewhere in this report). Six large canals and several small ditches divert water above station for irrigation.

AVERAGE DISCHARGE.--64 years, 515 ft^3/s (14.58 m^3/s), 373,100 acre-ft/yr (460 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,820 ft^3/s (79.9 m^3/s) Dec. 27, 1964, gage height, 4.90 ft (1.494 m); maximum gage height, 5.38 ft (1.640 m) Dec. 15, 1932 (backwater from ice); minimum discharge, 1.0 ft^3/s (0.028 m^3/s) Aug. 25, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge near this site since 1905, 4,820 ft^3/s (137 m^3/s) Nov. 27, 1909.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,140 ft^3/s (32.3 m^3/s) Dec. 20; gage height, 3.50 ft (1.067 m); minimum, 1.8 ft^3/s (0.051 m^3/s) Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	O T	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	251	222	588	642	606	600	684	21	32	28	30	23
2	198	215	672	606	606	594	690	26	34	30	30	24
3	188	229	879	606	588	558	666	37	33	30	28	22
4	226	233	648	648	588	540	666	40	33	32	27	23
5	290	360	558	606	323	278	672	49	32	33	28	28
6	299	546	570	364	172	114	690	52	33	33	25	37
7	212	540	546	222	188	132	690	57	34	34	26	27
8	188	534	540	195	208	146	690	61	34	31	26	27
9	185	528	672	163	316	330	684	66	37	31	27	27
10	172	528	697	188	624	650	666	43	40	30	27	27
11	191	528	684	396	606	660	636	86	38	31	28	28
12	132	522	711	618	576	660	346	83	34	31	28	33
13	88	522	774	606	600	640	126	122	33	31	28	33
14	114	528	851	630	600	620	46	102	33	31	28	32
15	109	522	948	636	612	600	64	104	32	34	28	33
16	107	522	988	654	600	580	57	117	32	37	28	33
17	52	534	1010	678	588	560	83	35	31	38	30	33
18	38	534	705	690	582	560	81	28	31	38	27	34
19	50	534	546	711	588	570	86	28	30	38	41	34
20	50	495	781	725	612	582	63	30	31	33	54	33
21	50	522	1070	690	606	582	55	28	32	32	64	34
22	49	516	1070	672	600	624	83	28	32	32	88	34
23	26	528	1000	660	606	660	37	28	31	31	75	34
24	15	570	865	624	606	660	27	31	32	30	100	35
25	17	588	837	612	606	672	28	31	32	28	135	34
26	19	588	802	618	606	678	134	31	30	30	114	32
27	23	600	753	612	612	678	79	31	32	31	55	35
28	110	510	732	618	606	678	18	32	31	30	38	34
29	270	385	774	612	---	672	14	32	30	30	30	34
30	309	485	746	606	---	672	18	32	30	28	31	54
31	236	---	697	606	---	672	---	31	---	31	26	---
TOTAL	4264	14468	23714	17514	15031	17222	8879	1522	979	987	1350	951
MEAN	138	482	765	565	537	556	296	49.1	32.6	31.8	43.5	31.7
MAX	309	600	1070	725	624	678	690	122	40	38	135	54
MIN	15	215	540	163	172	114	14	21	30	28	25	22
AC-FT	8460	28700	47040	34740	29810	34160	17610	3020	1940	1960	2680	1890

CAL YR 1977 TOTAL 105464 MEAN 289 MAX 1070 MIN 15 AC-FT 209200
WTR YR 1978 TOTAL 106881 MEAN 293 MAX 1070 MIN 14 AC-FT 212000

14073001 TUMALO CREEK NEAR BEND, OR

LOCATION.--Lat 44°05'16", long 121°22'18", in NW¼SE¼ sec.23, T.17 S., R.11 E., Deschutes County, Hydrologic Unit 17070301, on left bank 0.25 mi (0.40 km) upstream from diversion to Tumalo feed canal, 3.0 mi (4.8 km) northwest of Bend, and at mile 3.1 (5.0 km).

DRAINAGE AREA.--47.3 mi^2 (123 km^2).

PERIOD OF RECORD.--October 1913 to December 1921, February, April to November 1922, March 1923 to current year. Published as "below Bend" 1949-50.

REVISED RECORDS.--WSP 864: 1937. WSP 1218: Drainage area. WSP 1448: 1923(M), 1927-29(M), 1935(M), 1942(M). WDR OR-75-1: 1974(M).

GAGE.--Water-stage recorder. Datum of gage is 3,566.82 ft (1,087.167 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 27, 1915, nonrecording gage and Apr. 27, 1915, to Sept. 30, 1918, water-stage recorder or nonrecording gage at same site and datum.

REMARKS.--Records good. All records given herein include flow in Columbia Southern Canal, which diverts 8 mi (13 km) above station for irrigation of land near Tumalo. No flow in the canal Oct. 1 to May 15. Crater Creek Canal diverts flow of tributaries of Soda Creek into head of Tumalo Creek. Diversion above station for municipal supply of Bend began Dec. 15, 1926, and averaged 7.0 ft^3/s (0.20 m^3/s) for water year 1978.

AVERAGE DISCHARGE.--60 years (water years 1914, 1917-21, 1924-35, 1937-78), 102 ft^3/s (2.889 m^3/s), 73,900 acre-ft/yr (91.1 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,140 ft^3/s (32.3 m^3/s) Nov. 9, 1958 (no flow in canal), from rating curve extended above 780 ft^3/s (22.1 m^3/s) on basis of slope-area measurement at 3.45 ft (1.052 m); minimum daily, 25 ft^3/s (0.71 m^3/s) Jan. 3, 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 695 ft^3/s (19.7 m^3/s) Dec. 14, no flow in canal; minimum daily, 33 ft^3/s (0.93 m^3/s) Nov. 21, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	52	108	80	60	55	95	89	180	205	62	59
2	47	68	148	65	60	55	91	97	194	180	62	60
3	44	55	226	60	66	59	85	104	209	151	62	63
4	44	52	135	70	66	57	81	97	231	147	64	67
5	44	52	113	75	68	59	79	91	252	158	69	69
6	44	50	111	69	68	55	79	89	274	157	67	72
7	47	52	106	69	68	55	75	91	266	166	63	70
8	47	50	102	69	68	59	73	102	249	142	63	69
9	45	52	95	77	68	60	73	125	274	137	62	71
10	44	50	97	75	68	57	77	133	216	129	59	79
11	44	49	100	71	68	59	91	120	172	106	56	76
12	44	49	93	68	60	55	81	113	164	102	59	71
13	44	49	324	73	58	57	79	158	163	103	65	74
14	44	53	590	75	64	57	77	163	140	105	56	71
15	44	64	399	75	64	52	75	153	125	108	58	67
16	44	60	261	73	64	53	77	132	126	115	62	68
17	44	52	208	71	66	53	73	135	141	92	57	67
18	42	49	163	69	66	55	69	147	171	82	53	55
19	42	45	140	68	66	57	71	148	189	77	54	66
20	42	40	130	68	68	60	69	157	185	75	57	64
21	42	33	125	66	66	64	68	183	213	72	64	66
22	42	45	113	64	64	64	68	182	213	69	63	66
23	44	60	111	64	64	69	64	144	196	70	58	64
24	44	77	108	60	62	66	66	132	194	70	64	64
25	50	247	104	60	62	64	75	123	156	73	76	64
26	50	296	100	62	60	68	104	116	135	88	66	62
27	47	143	93	62	57	77	97	124	155	91	64	62
28	45	111	91	60	57	81	95	166	173	75	59	62
29	49	140	89	60	---	85	93	163	201	68	58	64
30	49	115	85	59	---	87	93	144	198	64	63	64
31	49	---	83	60	---	95	---	143	---	62	65	---
TOTAL	1400	2310	4751	2097	1796	1949	2393	4064	5755	3339	1910	1996
MEAN	45.2	77.0	153	67.6	64.1	62.9	79.8	131	192	108	61.6	66.5
MAX	50	296	590	80	68	95	104	183	274	205	76	79
MIN	42	33	83	59	57	52	64	89	125	62	53	55
AC-FT	2780	4580	9420	4160	3560	3870	4750	8060	11420	6620	3790	3960

CAL YR 1977 TOTAL 24941 MEAN 68.3 MAX 590 MIN 32 AC-FT 49470
WTR YR 1978 TOTAL 33760 MEAN 92.5 MAX 590 MIN 33 AC-FT 66960

14075000 SQUAW CREEK NEAR SISTERS, OR

LOCATION.--Lat 44°14'02", long 121°33'57", in SE¼SW¼ sec.29, T.15 S., R.10 E., Deschutes County, Hydrologic Unit 17070301, on right bank 800 ft (244 m) upstream from intake of McAllister ditch, 4 mi (6 km) south of Sisters, and at mile 26.8 (43.1 km).

DRAINAGE AREA.--54.8 mi^2 (141.9 km^2).

PERIOD OF RECORD.--July 1906 to October 1918, June to August 1919, October 1919 to September 1920, May 1921 to September 1924 (no winter records), April 1925 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1218: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,490 ft (1,064 m), by barometer. July 1, 1906, to May 29, 1913, nonrecording gage at site 1,000 ft (305 m) downstream at different datum, below intake of McAllister ditch (records include flow in McAllister ditch). May 30, 1913, to Sept. 2, 1915, nonrecording gage and Mar. 24, 1916, to Oct. 5, 1928, water-stage recorder at site 300 ft (91 m) downstream at different datum. Oct. 6, 1928, to Nov. 7, 1967, water-stage recorder at site 200 ft (61 m) downstream at datum 2.64 ft (0.805 m) lower.

REMARKS.--Records good. No regulation. A canal near mouth of Pole Creek, a tributary above station, diverts entire flow of that creek for irrigation of lands near Sisters.

AVERAGE DISCHARGE.--66 years (water years 1907-18, 1920, 1926-78), 106 ft^3/s (3.002 m^3/s), 76,800 acre-ft/yr (94.7 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge since 1909, 1,980 ft^3/s (56.1 m^3/s) Dec. 23, 1964, from rating curve extended above 280 ft^3/s (7.93 m^3/s) on basis of slope-area measurement of peak flow; maximum gage height, about 8.75 ft (2.667 m), over top of gage Nov. 22, 1909, site and datum then in use (discharge not determined); minimum discharge, 14 ft^3/s (0.40 m^3/s) Mar. 2, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 470 ft^3/s (13.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	1900	1,330	37.7	*4.93	1.503	Dec. 13	1830	*1,400	39.6	4.92	1.500
Dec. 2	2300	646	18.3	3.51	1.070						

Minimum, 30 ft^3/s (0.85 m^3/s) Nov. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	44	134	67	43	50	78	57	130	187	121	75
2	47	60	271	62	44	50	73	62	143	181	117	81
3	46	43	323	58	52	51	69	62	159	158	119	85
4	45	40	191	55	51	51	65	59	181	150	128	83
5	45	41	167	57	51	51	64	55	202	159	132	91
6	47	39	181	60	51	50	63	54	221	164	126	86
7	45	39	159	60	52	53	60	55	219	181	129	73
8	39	35	143	63	49	58	59	61	216	170	131	76
9	39	40	146	65	50	57	59	75	235	169	127	86
10	38	36	136	60	49	54	63	78	188	163	117	92
11	38	37	150	57	48	54	67	71	158	149	113	78
12	38	36	134	55	45	52	62	68	151	149	121	70
13	38	38	896	58	44	52	60	144	145	153	109	70
14	38	55	958	57	49	51	58	136	130	166	93	71
15	38	69	467	54	49	51	55	114	116	184	106	69
16	38	50	312	54	48	51	55	92	114	188	104	68
17	37	51	259	52	48	52	53	90	125	165	89	67
18	37	51	214	49	48	54	52	94	141	150	82	67
19	37	44	191	50	48	56	52	101	153	146	82	66
20	36	40	178	48	48	58	51	108	160	141	86	65
21	36	62	159	48	49	60	49	138	190	138	89	65
22	36	84	138	45	49	61	49	130	191	138	86	63
23	38	108	125	42	50	64	48	107	178	149	75	63
24	38	156	115	58	52	60	49	97	164	169	92	64
25	49	683	101	51	51	60	55	90	147	187	110	64
26	40	441	92	44	51	65	74	88	134	210	80	66
27	38	194	96	43	50	68	61	109	146	186	75	67
28	38	141	101	43	50	71	61	139	162	146	75	64
29	38	213	82	44	---	74	59	128	191	137	76	63
30	36	150	78	42	---	78	59	114	192	130	77	64
31	37	---	72	42	---	79	---	111	---	129	74	---
TOTAL	1238	3120	6769	1643	1369	1796	1782	2887	4982	4992	3141	2162
MEAN	39.9	104	218	53.0	48.9	57.9	59.4	93.1	166	161	101	72.1
MAX	49	683	958	67	52	79	78	144	235	210	132	92
MIN	36	35	72	42	43	50	48	54	114	129	74	63
AC-FT	2460	6190	13430	3260	2720	3560	3530	5730	9880	9900	6230	4290

CAL YR 1977 TOTAL 27875 MEAN 76.4 MAX 958 MIN 35 AC-FT 55290
WTR YR 1978 TOTAL 35881 MEAN 98.3 MAX 958 MIN 35 AC-FT 71170

14076500 DESCHUTES RIVER NEAR CULVER, OR

LOCATION.--Lat 44°29'56", long 121°19'12", in NW¼SE¼ sec.29, T.12 S., R.12 E., Jefferson County, Hydrologic Unit 17070301, on right bank 2.5 mi (4.0 km) downstream from Squaw Creek, 6.0 mi (9.7 km) southwest of Culver, and at mile 120.6 (194.0 km).

DRAINAGE AREA.--2,705 mi² (7,006 km²).

PERIOD OF RECORD.--July 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,980 ft (603 m) National Geodetic Vertical Datum of 1929 (river-profile survey). July 14, 1952, to Sept. 30, 1961, at site 4.1 mi (6.6 km) downstream at different datum.

REMARKS.--Records excellent. Slight regulation by Crescent Lake and Crane Prairie and Wickiup Reservoirs (see elsewhere in this report). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--26 years, 924 ft³/s (26.17 m³/s), 669,400 acre-ft/yr (825 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,680 ft³/s (189 m³/s) Dec. 24, 1964, gage height, 10.00 ft (3.048 m), from rating curve extended above 2,200 ft³/s (62.3 m³/s) on basis of slope-area measurement of peak flow; minimum, 418 ft³/s (11.8 m³/s) July 7, 8, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,100 ft³/s (87.8 m³/s) Dec. 14, gage height, 6.94 ft (2.115 m); minimum, 486 ft³/s (13.8 m³/s) June 14, 15, 19, 20, Aug. 1-6, 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	629	734	1250	1340	1240	1230	1200	505	493	524	489	502
2	763	713	1330	1260	1240	1220	1200	502	499	543	489	499
3	727	716	1890	1290	1250	1220	1210	511	508	530	489	496
4	720	720	1720	1290	1230	1180	1170	524	508	517	489	499
5	763	730	1350	1310	1240	1170	1250	511	521	530	489	499
6	843	905	1320	1230	862	805	1260	511	543	530	489	505
7	828	1020	1330	948	790	727	1260	524	549	524	493	514
8	741	1020	1250	893	805	749	1260	517	527	553	493	511
9	727	1020	1240	878	820	794	1260	536	505	533	493	514
10	720	1020	1370	797	1040	1030	1250	556	514	524	489	511
11	703	1020	1370	790	1250	1230	1250	540	505	514	489	511
12	727	1050	1340	1060	1220	1240	1220	576	496	508	493	508
13	662	1060	1760	1220	1220	1230	843	559	493	505	496	511
14	619	1060	2720	1170	1240	1220	709	662	493	499	496	521
15	639	1070	2590	1190	1240	1200	649	649	489	496	499	517
16	635	1070	2150	1220	1230	1160	652	629	493	493	499	514
17	632	1060	2010	1220	1230	1170	639	619	493	496	493	517
18	599	1070	1900	1250	1220	1170	625	576	489	496	496	517
19	556	1060	1380	1290	1200	1180	582	543	489	496	499	514
20	572	1020	1360	1260	1190	1180	576	521	493	496	499	543
21	572	983	1750	1250	1160	1110	566	499	496	496	524	511
22	572	1050	1860	1260	1140	1120	530	502	499	493	533	511
23	572	1070	1810	1230	1160	1170	572	521	517	493	569	511
24	566	1160	1700	1220	1140	1190	546	499	514	493	553	508
25	536	1560	1580	1200	1140	1180	517	493	517	493	582	508
26	549	2130	1530	1250	1140	1210	533	493	514	493	612	511
27	543	1550	1490	1250	1170	1230	639	493	505	499	599	505
28	508	1370	1430	1250	1230	1240	605	493	499	502	543	502
29	572	1260	1440	1260	---	1240	543	493	505	496	514	508
30	812	1230	1450	1250	---	1200	511	502	521	493	514	508
31	760	---	1400	1250	---	1200	---	496	---	493	502	---
TOTAL	20367	32501	50070	36576	32037	35195	25627	16555	15187	15751	15906	15306
MEAN	657	1083	1615	1180	1144	1135	854	534	506	508	513	510
MAX	843	2130	2720	1340	1250	1240	1260	662	549	553	612	543
MIN	508	713	1240	790	790	727	511	493	489	493	489	496
AC-FT	40400	64470	99310	72550	63550	69810	50830	32840	30120	31240	31550	30360

CAL YR 1977 TOTAL 301278 MEAN 825 MAX 2720 MIN 480 AC-FT 597600
WTR YR 1978 TOTAL 311078 MEAN 852 MAX 2720 MIN 489 AC-FT 617000

14080250 BEAR CREEK NEAR PRINEVILLE, OR

LOCATION.--Lat 44°03'40", long 120°43'54", in SE¼ sec.30, T.17 S., R.17 E., Crook County, Hydrologic Unit 17070304, on left bank upstream side of State Highway 27 bridge over Bear Creek, 17 mi (27.4 km) south of Prineville.

DRAINAGE AREA.--205 mi^2 (531 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,280 ft (1,000 m), from topographic map.

REMARKS.--Water-discharge records poor. Flow regulated by reservoirs upstream. Diversion for irrigation above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 848 ft^3/s (24.0 m^3/s) Aug. 6, 1976, gage height, 7.01 ft (2.137 m); minimum, 0.16 ft^3/s (0.005 m^3/s) June 28, June 30 to July 1, 1976.

EXTREMES FOR CURRENT PERIOD.--Water year 1977: Maximum discharge, 693 ft^3/s (19.6 m^3/s) June 7, gage height, 6.49 ft (1.978 m); minimum, 0.25 ft^3/s (0.007 m^3/s) July 29, 30.

Water year 1978: Maximum discharge, 189 ft^3/s (5.35 m^3/s) Apr. 27, gage height, 4.90 ft (1.494 m), from floodmark; minimum, 0.30 ft^3/s (0.008 m^3/s) Oct. 28.

REVISIONS.--Revised figures of discharge for the water year 1977, superseding those published in WDR OR-77-1 are given herein.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	1.7	1.6	1.6	1.2	1.1	1.1	1.2	1.3	.41	.29	.57
2	2.9	1.7	1.6	1.6	1.3	1.1	1.1	1.3	1.3	.46	.30	.52
3	3.0	1.7	1.7	1.6	1.2	1.0	1.1	1.3	1.3	.41	.30	.52
4	2.9	1.6	1.6	1.6	1.3	1.0	1.1	1.3	1.3	.41	.31	.52
5	2.9	1.6	1.7	1.6	1.3	1.0	1.1	1.3	1.2	.36	.31	.52
6	3.0	1.6	1.7	1.3	1.3	1.0	1.1	1.3	1.3	.36	.30	.52
7	3.0	1.6	1.7	1.3	1.3	1.0	1.1	1.3	87	.41	.30	.52
8	3.0	1.6	1.8	1.3	1.3	1.0	1.1	1.3	18	.36	.36	.52
9	2.2	1.6	1.8	1.2	1.3	1.0	1.1	1.3	5.4	.36	.41	.52
10	1.8	1.5	1.7	1.2	1.3	1.0	1.1	1.5	5.2	.36	.41	.57
11	1.8	1.7	1.7	1.2	1.3	1.1	1.1	1.5	4.4	.41	.41	.57
12	1.8	1.6	1.7	1.2	1.3	1.1	1.1	1.4	4.2	.41	.41	.52
13	1.8	1.6	1.7	1.2	1.2	1.1	1.1	1.3	.75	.41	.41	.52
14	1.8	1.6	1.7	1.2	1.2	1.2	1.1	1.3	.75	.41	.41	.57
15	1.8	1.6	1.7	1.2	1.1	1.2	1.1	1.4	.70	.41	.41	.52
16	1.8	1.6	1.9	1.2	1.1	1.2	1.1	1.4	.70	.46	.41	.52
17	1.8	1.5	1.9	1.2	1.1	1.2	1.1	1.3	.70	.46	.41	.52
18	1.8	1.5	1.7	1.2	1.1	1.2	1.2	1.3	.63	.46	.41	.52
19	1.8	1.5	1.7	1.2	1.1	1.2	1.2	1.3	.69	.41	.41	.52
20	1.8	1.5	1.7	1.2	1.1	1.2	1.3	1.1	.63	.46	.46	.52
21	1.7	1.5	1.6	1.2	1.1	1.2	1.3	1.3	.57	.41	.46	.46
22	1.7	1.5	1.6	1.2	1.1	1.2	1.3	1.3	.57	.41	.41	.46
23	1.7	1.5	1.6	1.2	1.1	1.1	1.2	1.3	.55	.36	.46	.46
24	1.7	1.5	1.6	1.2	1.1	1.1	1.2	1.4	.55	.36	.46	.46
25	1.7	1.6	1.5	1.2	1.1	1.1	1.2	1.4	.52	.36	.46	.46
26	1.7	1.5	1.5	1.1	1.1	1.1	1.2	1.3	.46	.36	.46	.46
27	1.7	1.6	1.5	1.1	1.1	1.1	1.2	1.3	.41	.31	.46	.46
28	1.7	1.7	1.5	1.1	1.1	1.1	1.2	1.3	.46	.30	.46	.46
29	1.7	1.6	1.5	1.1	---	1.1	1.2	1.3	.46	.26	.52	.52
30	1.7	1.6	1.6	1.1	---	1.1	1.2	1.3	.41	.25	.52	.52
31	1.7	---	1.6	1.2	---	1.1	---	1.3	---	.28	.52	---
TOTAL	64.3	47.5	51.4	39.0	33.2	34.2	34.6	40.9	142.41	11.86	12.63	15.32
MEAN	2.07	1.58	1.66	1.26	1.19	1.10	1.15	1.32	4.75	.38	.41	.51
MAX	3.0	1.7	1.9	1.6	1.3	1.2	1.3	1.5	87	.46	.52	.57
MIN	1.7	1.5	1.5	1.1	1.1	1.0	1.1	1.1	.41	.25	.29	.46
AC-FT	128	94	102	77	66	68	69	81	282	24	25	30

CAL YR 1976 TOTAL 1804.11 MEAN 4.93 MAX 244 MIN .20 AC-FT 3580
WTR YR 1977 TOTAL 527.32 MEAN 1.44 MAX 87 MIN .25 AC-FT 1050

14080250 BEAR CREEK NEAR PRINEVILLE, OR--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.63	.36	2.9	2.6	2.9	24	36	45	5.4	9.9	1.4	2.0
2	.63	.36	3.1	2.6	2.7	25	34	41	3.3	8.4	1.3	2.0
3	.63	.36	3.4	2.5	2.7	26	31	26	2.8	12	1.3	1.8
4	.63	.41	3.6	2.4	2.7	28	28	25	2.3	9.5	1.4	1.8
5	.63	.46	3.8	2.4	4.2	30	27	24	1.9	7.7	1.5	1.8
6	.63	.52	4.0	2.2	4.0	31	26	23	1.9	7.0	1.5	2.0
7	.63	.57	4.2	1.9	4.0	33	25	21	1.6	7.7	1.4	2.0
8	.52	.69	4.4	1.9	4.0	58	24	20	1.6	8.4	1.3	2.2
9	.41	.75	4.6	1.8	4.0	94	22	18	1.7	7.0	1.3	2.3
10	.41	.81	4.9	1.7	3.8	57	21	19	1.6	6.2	1.2	2.5
11	.41	.87	5.4	1.7	3.8	52	21	17	1.7	5.6	1.2	2.7
12	.41	.94	5.7	1.7	3.8	47	20	15	1.8	5.4	1.2	2.8
13	.41	1.0	6.0	1.6	3.8	43	20	15	1.9	5.2	1.2	2.9
14	.41	1.1	6.3	1.5	3.6	38	19	15	2.0	4.7	1.2	3.1
15	.41	1.3	7.4	1.5	6.3	36	19	15	2.0	4.0	1.3	3.3
16	.41	1.3	7.0	1.4	6.0	38	18	15	2.0	3.5	1.3	3.2
17	.41	1.3	6.3	2.2	6.0	43	18	14	2.0	3.5	1.3	3.1
18	.36	1.4	5.4	2.1	6.0	49	17	13	2.0	3.1	1.3	3.1
19	.36	1.5	5.2	2.1	6.0	54	17	12	2.0	2.9	1.2	3.0
20	.36	1.6	4.6	2.1	6.3	65	16	12	1.9	3.0	1.2	3.0
21	.36	1.7	4.4	2.1	6.7	64	16	11	2.0	2.9	1.1	2.9
22	.36	1.7	4.2	2.0	6.7	63	17	11	2.0	2.5	1.1	2.8
23	.36	1.8	4.2	3.2	7.0	62	17	9.9	2.0	2.3	1.2	2.8
24	.36	2.0	4.0	3.2	9.9	50	17	9.5	3.2	2.1	1.3	2.7
25	.36	2.1	3.8	3.2	13	47	19	8.7	5.4	2.0	1.3	2.4
26	.36	2.2	3.4	3.1	14	45	77	8.4	4.5	2.0	1.3	2.4
27	.36	2.4	3.2	3.1	15	42	157	8.0	4.2	2.3	1.3	2.3
28	.30	2.5	3.1	3.1	21	41	67	7.7	12	2.3	1.2	2.3
29	.36	2.6	2.9	3.1	---	39	57	7.0	12	2.0	1.2	2.3
30	.36	2.7	2.9	2.9	---	38	51	6.2	11	1.8	1.1	2.3
31	.36	---	2.7	2.9	---	36	---	5.4	---	1.4	1.8	---
TOTAL	13.60	39.30	137.0	71.8	179.9	1398	954	497.8	101.7	148.3	39.9	75.8
MEAN	.44	1.31	4.42	2.32	6.43	45.1	31.8	16.1	3.39	4.78	1.29	2.53
MAX	.63	2.7	7.4	3.2	21	94	157	45	12	12	1.8	3.3
MIN	.30	.36	2.7	1.4	2.7	24	16	5.4	1.6	1.4	1.1	1.8
AC-FT	27	78	272	142	357	2770	1890	987	202	294	79	150

CAL YR 1977 TOTAL 554.02 MEAN 1.52 MAX 87 MIN .25 AC-FT 1100
WTR YR 1978 TOTAL 3657.10 MEAN 10.0 MAX 157 MIN .30 AC-FT 7250

14080250 BEAR CREEK NEAR PRINEVILLE, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1976 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1975 to September 1976.
SUSPENDED SEDIMENT DISCHARGE: October 1975 to current year.

REMARKS.--Random temperature measurements were made at time of sediment sampling and are available at the district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily, 35,000 mg/l Aug. 6, 1976; minimum daily, 15 mg/l Oct. 30 to Nov. 8, 1976.
SEDIMENT DISCHARGE: Maximum daily, 124,000 tons (112,000 tonnes) Apr. 27, 1978; minimum daily, 0 tons (0 tonnes) Oct. 1-8, 1977.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily, 13,600 mg/l Apr. 27; minimum daily, 38 mg/l Aug. 15.
SEDIMENT DISCHARGE: Maximum daily, 124,000 tons (112,000 tonnes) Apr. 27; minimum daily, 0 tons (0 tonnes) Oct. 1-8.

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	90	.15	96	.09	87	.68	87	.61	76	.59	210	14
2	92	.16	97	.09	94	.77	87	.61	76	.56	210	14
3	94	.16	97	.09	100	.92	87	.58	75	.55	200	14
4	94	.16	94	.10	89	.86	87	.55	75	.55	200	15
5	95	.16	89	.11	77	.78	87	.55	74	.83	200	16
6	96	.16	86	.12	65	.69	87	.52	74	.79	200	17
7	95	.16	83	.13	68	.76	88	.46	73	.78	220	19
8	94	.13	87	.16	71	.84	88	.46	73	.78	620	97
9	93	.10	91	.18	74	.93	88	.43	72	.77	3500	884
10	92	.10	95	.21	77	1.0	87	.41	72	.73	850	130
11	91	.10	99	.23	80	1.2	87	.39	71	.72	380	53
12	89	.10	95	.24	83	1.3	86	.39	71	.72	330	42
13	88	.10	91	.25	87	1.4	86	.37	70	.71	280	32
14	87	.10	87	.25	91	1.6	85	.34	70	.68	220	22
15	86	.10	83	.28	94	1.9	85	.34	80	1.4	220	21
16	85	.09	83	.28	97	1.8	84	.32	76	1.2	240	24
17	84	.09	83	.30	100	1.7	84	.51	73	1.2	280	33
18	82	.08	83	.32	100	1.5	83	.48	75	1.2	320	43
19	81	.08	82	.33	95	1.3	83	.48	76	1.2	620	91
20	80	.08	82	.35	88	1.1	82	.47	80	1.4	1200	209
21	77	.07	82	.37	80	.95	82	.47	80	1.4	1000	173
22	73	.07	82	.39	88	.99	81	.44	80	1.4	780	134
23	70	.07	81	.40	87	.98	81	.70	80	1.5	700	118
24	82	.08	81	.44	86	.92	80	.70	130	3.5	670	91
25	94	.09	84	.48	86	.88	80	.70	300	11	620	78
26	94	.09	88	.53	86	.79	79	.65	260	9.9	570	69
27	95	.09	92	.58	86	.75	79	.65	220	8.7	520	59
28	95	.08	96	.64	86	.71	78	.64	210	12	470	52
29	95	.09	98	.69	86	.67	78	.64	---	---	420	44
30	96	.09	92	.68	86	.67	77	.60	---	---	430	44
31	96	.09	---	---	86	.64	77	.60	---	---	390	38
TOTAL	---	3.27	---	9.31	---	31.98	---	16.06	---	66.76	---	2690

14080250 BEAR CREEK NEAR PRINEVILLE, OR—Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	340	33	600	73	150	2.2	330	8.8	100	.37	66	.35
2	300	28	490	54	150	1.3	320	7.2	93	.32	70	.37
3	250	21	380	26	130	.97	310	9.8	87	.31	75	.37
4	220	17	310	21	120	.73	300	7.7	80	.30	76	.37
5	210	15	300	20	110	.56	260	5.4	73	.29	78	.38
6	210	15	290	18	92	.47	260	4.9	66	.27	73	.39
7	200	14	270	16	77	.33	250	5.2	60	.22	70	.37
8	190	12	260	14	75	.32	250	5.6	53	.19	71	.42
9	190	11	290	14	72	.33	250	4.8	46	.16	71	.45
10	180	10	320	16	70	.30	240	4.0	46	.15	73	.50
11	180	10	270	12	65	.30	240	3.7	42	.14	74	.53
12	170	9.3	220	9.2	64	.31	230	3.3	40	.13	75	.56
13	170	9.2	210	8.7	64	.33	230	3.2	39	.13	76	.59
14	170	8.9	200	8.2	62	.33	220	2.8	39	.13	71	.59
15	170	8.6	200	8.3	64	.34	210	2.3	38	.13	70	.63
16	160	7.9	190	7.9	66	.36	210	2.0	39	.13	69	.60
17	160	7.8	180	6.9	68	.37	200	1.9	46	.16	67	.56
18	160	7.5	170	5.9	70	.37	200	1.7	46	.16	68	.57
19	160	7.2	170	5.5	71	.38	190	1.5	46	.15	64	.51
20	150	6.5	170	5.4	71	.36	180	1.4	48	.15	64	.51
21	210	9.3	160	4.9	78	.41	170	1.3	49	.15	63	.49
22	220	9.9	160	4.7	81	.44	170	1.2	51	.15	61	.45
23	220	10	150	4.0	88	.47	160	.97	52	.17	60	.45
24	220	10	150	3.8	100	.87	150	.85	55	.19	60	.43
25	220	11	150	3.5	100	1.5	150	.82	57	.20	64	.42
26	1000	208	150	3.4	110	1.3	140	.77	60	.21	64	.42
27	13600	124000	150	3.2	110	1.2	130	.82	61	.21	66	.42
28	1400	253	150	3.1	400	13	130	.79	62	.21	68	.41
29	1000	153	150	2.9	400	13	120	.66	64	.21	69	.42
30	800	111	150	2.5	350	10	110	.54	66	.20	70	.43
31	---	---	150	2.2	---	---	110	.41	66	.32	---	---
TOTAL	---	125034.1	---	388.2	---	53.15	---	96.33	---	6.21	---	13.96

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .002 MM
MAR 09...	1140	3480	808	90	87	76	63	48	37
APR 27...	1100	8700	3690	67	47	30	19	13	11
JUN 29...	0930	27	95	99	99	96	93	85	68

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE (DEG C)	PH (UNITS)	OXYGEN, DISSOLVED (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	IRON, DISSOLVED (UG/L AS FE)	SILICA, DISSOLVED (MG/L AS SIO2)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
AUG 09...	1500	1.3	13.9	7.7	9.1	640	20	27	47	30	49
SEP 07...	1130	2.2	11.0	8.0	9.3	560	70	29	48	26	48

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER DAY)
AUG 09...	2.7	290	41	13	.2	.07	.02	240	0	383	1.34
SEP 07...	2.3	260	33	9.2	.3	.14	.09	230	0	354	2.10

14080400 PRINEVILLE RESERVOIR NEAR PRINEVILLE, OR

LOCATION.--Lat 44°06'50", long 120°46'50", in SW¼NW¼ sec.11, T.17 S., R.16 E., Crook County, Hydrologic Unit 17070304, at right end of Prineville Dam on Crooked River, 13.8 mi (22.2 km) south of Prineville, and at mile 72.5 (116.7 km).

DRAINAGE AREA.--2,700 mi² (6,990 km²) approximately, of which 500 mi² (1,300 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Aug. 13, 1969, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam with ungated concrete spillway and concrete outlet tunnel controlled by two 4-ft (1.2 m) by 6-ft (1.8 m) regulating gates. Storage began in December 1960. Total capacity at elevation 3,234.80 ft (985.967 m), crest of spillway, is 154,700 acre-ft (191 hm³), of which 152,800 acre-ft (188 hm³) is active storage above 3,114.00 ft (949.147 m), proposed minimum pool. Reservoir used for flood control, irrigation, and recreation. Figures given herein represent active storage.

COOPERATION.--Gage inspected and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 165,800 acre-ft (204 hm³) Dec. 27, 1964, elevation, 3,238.95 ft (987.232 m); minimum observed, 37,400 acre-ft (46.1 hm³) Oct. 31, Nov. 1, 1977, elevation, 3,177.40 ft (986.472 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 162,000 acre-ft (200 hm³) Apr. 29, elevation, 3,237.77 ft (986.872 m); minimum observed, 37,400 acre-ft (46.1 hm³) Oct. 31, Nov. 1, elevation, 3,177.40 ft (986.472 m).

Capacity table (elevation, in feet, and usable contents, in acre-feet)

3,175	34,600	3,210	90,400
3,180	40,600	3,215	101,100
3,185	47,400	3,220	112,600
3,190	54,700	3,230	138,700
3,195	62,600	3,235	153,400
3,200	71,200	3,239	165,900
3,205	80,400		

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3177.91	---	3180.90	3197.46	3211.07	3217.46	3234.00	3237.37	3234.86	3232.15	3227.58	3222.22
2	3177.86	---	3181.10	3197.53	3211.03	3217.65	3234.38	3236.98	3234.78	3232.02	3227.34	3222.38
3	3177.83	3177.45	3181.16	3197.73	3211.32	3217.91	3234.38	3236.56	3234.75	3231.92	3227.23	3222.58
4	3177.83	3177.55	3181.85	3197.94	3212.45	3217.94	3234.21	3236.30	3234.68	3231.85	3227.00	3222.25
5	3177.77	3177.55	3182.11	3197.99	3213.18	3218.23	3234.10	3235.91	3234.59	3231.76	3226.80	3221.00
6	3177.78	3177.60	3182.36	3198.54	3213.73	3218.87	3234.28	3235.44	3234.52	3231.70	3226.54	3220.75
7	3177.85	3177.65	3182.55	3198.77	3213.73	3219.21	3234.61	3235.10	3234.42	3231.60	3226.37	3220.49
8	3177.82	3177.70	3182.75	3199.05	3213.38	3220.24	3234.96	3234.73	3234.29	3231.53	3226.18	3220.36
9	3177.66	3177.75	3182.95	3199.42	3212.79	3222.49	3235.22	3234.53	3234.14	3231.42	3225.96	3220.14
10	3177.65	3177.79	3183.07	3200.63	3212.12	3223.41	3235.44	3234.73	3234.35	3231.34	3225.90	3219.98
11	3177.61	3177.83	3183.23	3202.03	3211.54	3223.33	3235.35	3234.94	3234.00	3231.22	3225.50	3219.86
12	3177.58	3177.85	3183.35	3202.84	3211.53	3223.21	3235.38	3235.11	3233.92	3231.14	3225.25	3219.71
13	3177.52	3177.92	3183.51	3203.51	3211.52	3222.95	3235.34	3235.30	3233.82	3231.05	3225.04	3219.57
14	3177.43	3177.95	3184.95	3204.43	3211.51	3222.64	3235.40	3235.42	3233.67	3230.93	3224.86	3219.46
15	3177.44	3178.00	3189.50	3206.71	3211.49	3222.71	3235.37	3235.51	3233.58	3230.79	3224.70	3219.31
16	---	3178.03	3192.00	3208.55	3211.36	3222.99	3235.33	3235.59	3233.54	3230.64	3224.44	3219.16
17	---	3178.08	3192.93	3210.23	3211.28	3222.99	3235.31	3235.58	3233.51	3230.54	3224.23	3219.00
18	---	3178.12	3193.75	3211.19	3211.36	3223.98	3235.38	3235.57	3233.53	3230.29	3224.10	3218.84
19	---	3178.15	3194.11	3211.53	3211.44	3225.15	3235.45	3235.48	3233.25	3230.20	3223.93	3218.70
20	---	3178.15	3194.25	3211.57	3211.68	3226.38	3235.43	3235.98	3233.23	3230.00	3223.75	3218.57
21	---	3178.19	3194.12	3211.58	3212.16	3227.56	3235.33	3235.55	3232.94	3229.80	3223.53	3218.43
22	---	3178.23	3194.39	3211.16	3212.82	3228.86	3235.31	3234.79	3232.87	3229.60	3223.30	3218.31
23	---	3178.32	3194.76	3210.83	3213.50	3229.96	3235.11	3234.95	3232.71	3229.39	3223.15	3218.27
24	---	3178.45	3195.17	3210.58	3214.16	3230.57	3235.01	3234.97	3232.72	3229.14	3222.97	3218.20
25	---	3178.59	3195.53	3210.70	3216.01	3231.02	3235.11	3235.00	3232.63	3228.92	3222.80	3218.09
26	---	3178.92	3195.90	3210.93	3215.96	3231.60	3236.01	3234.98	3232.56	3228.70	3222.63	3217.96
27	---	3179.43	3196.21	3211.07	3216.67	3232.23	3237.30	3234.98	3232.47	3228.54	3222.48	3217.84
28	---	3179.97	3196.51	3211.07	3217.17	3232.66	3237.73	3234.99	3232.37	3228.36	3222.30	3217.80
29	---	3180.25	3196.80	3211.07	---	3233.06	3237.77	3234.99	3232.27	3228.17	3222.10	3217.54
30	---	3180.60	3197.02	3211.07	---	3233.34	3237.61	3234.94	3232.20	3227.98	3221.90	3217.40
31	3177.40	---	3197.34	3210.98	---	3233.60	---	3234.86	---	3227.76	3222.08	---
MEAN	---	---	3189.23	3205.76	3212.78	3224.97	3235.39	3235.39	3233.57	3230.33	3224.58	3219.47
MAX	---	---	3197.34	3211.58	3217.17	3233.60	3237.77	3237.37	3234.86	3232.15	3227.58	3222.58
MIN	---	---	3180.90	3197.46	3211.03	3217.46	3234.00	3234.53	3232.20	3227.76	3221.90	3217.40
(†)	37,380	41,390	66,560	92,410	106,000	147,600	161,500	153,000	145,100	132,500	117,700	106,500
(‡)	-720	+4,010	+25,170	+25,850	+13,590	+41,600	+13,900	-8,500	-7,900	-12,600	-14,800	-11,200

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

14080500 CROOKED RIVER NEAR PRINEVILLE, OR

LOCATION.--Lat 44°06'50", long 120°47'40", in SW¼NE¼ sec.10, T.17 S., R.16 E., Crook County, Hydrologic Unit 17070304, on right bank 0.4 mi (0.6 km) downstream from Prineville Dam, 13.6 mi (21.9 km) south of Prineville, and at mile 72.1 (116.0 km).

DRAINAGE AREA.--2,700 mi² (7,000 km²), approximately, of which 500 mi² (1,300 km²) is probably noncontributing.

PERIOD OF RECORD.--November 1908 to September 1914, March 1941 to current year. Published as "near Prineville" 1908-12, as "at Hoffman's ranch, near Prineville" 1913-14, and as "above Hoffman Dam, near Prineville" March 1941 to September 1960. The estimate of monthly mean discharge for October 1908, published in WSP 370, has been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1448: 1909-13, 1914(M), drainage area (at sites prior to Apr. 24, 1961). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 3,070.85 ft (935.995 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to September 1914, nonrecording gage at several sites from 9 mi (14 km) to 23 mi (37 km) downstream at various datums. Mar. 26, 1941, to Apr. 23, 1961, water-stage recorder at site 5.5 mi (8.8 km) downstream at different datum.

REMARKS.--Records excellent except those for period of no gage-height record, which are good. Flow completely regulated since December 1960 by Prineville Reservoir (see station 14080400). Diversions for irrigation above station. Discharge not adjusted for storage or release from Prineville Reservoir as evaporation from reservoir at times exceeds natural flow.

AVERAGE DISCHARGE.--24 years (water years 1910-14, 1942-60), 378 ft³/s (10.70 m³/s), 273,700 acre-ft/yr (337 hm³/yr); 18 years (water years 1961-78), 301 ft³/s (8.524 m³/s), 218,100 acre-ft/yr (269 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,410 ft³/s (238 m³/s) Mar. 26, 1952, gage height, 8.2 ft (2.50 m), from floodmark, site and datum then in use; no flow Aug. 13-21, 1959, Jan. 3-5, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,000 ft³/s (56.6 m³/s) Apr. 3, gage height, 6.65 ft (2.027 m); minimum, 1.5 ft³/s (0.042 m³/s) Nov. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	38	22	47	372	381	1870	1630	258	235	265	231
2	62	26	22	47	372	381	1880	1590	251	233	263	231
3	60	26	22	47	372	455	1940	1530	242	233	263	231
4	60	26	22	47	375	564	1820	1470	242	233	263	229
5	60	26	22	47	375	564	1390	1350	244	231	263	229
6	60	26	22	48	685	656	936	1200	244	231	263	229
7	60	26	22	48	1320	740	705	1170	244	229	263	229
8	60	26	22	48	1610	745	572	1150	246	229	263	218
9	60	26	22	48	1600	960	584	750	242	229	263	206
10	60	26	22	48	1600	1480	664	267	233	227	260	206
11	60	26	22	51	1050	1810	845	272	233	227	260	206
12	60	26	22	56	518	1810	936	281	235	226	260	206
13	60	26	22	56	518	1810	830	286	235	226	260	206
14	61	26	22	57	518	1390	680	301	235	224	260	206
15	60	26	23	57	518	740	685	393	235	224	260	206
16	60	26	23	60	514	539	690	539	235	224	260	206
17	60	26	24	105	369	539	690	600	235	260	258	206
18	60	20	24	298	244	539	695	596	237	316	244	206
19	60	21	32	765	244	542	690	588	237	316	233	206
20	60	21	47	1150	244	542	690	580	237	316	233	206
21	60	22	47	1190	244	546	680	572	235	314	233	206
22	60	22	47	1190	244	549	676	560	237	314	233	195
23	60	22	47	1020	244	870	668	490	237	314	233	178
24	60	22	47	672	246	1610	535	237	237	298	233	178
25	60	22	47	309	246	1580	430	298	237	267	231	178
26	60	22	47	249	246	1230	895	301	235	267	231	178
27	60	22	47	301	246	1170	1380	301	235	267	231	178
28	60	22	47	372	316	1240	1560	301	235	267	231	178
29	60	22	47	372	---	1420	1690	298	235	265	231	178
30	60	22	47	372	---	1550	1670	298	235	265	231	178
31	61	---	47	372	---	1760	---	274	---	265	231	---
TOTAL	1872	736	998	9549	15450	30712	29976	20473	7158	7972	7706	6124
MEAN	60.4	24.5	32.2	308	552	991	999	660	239	257	249	204
MAX	68	38	47	1190	1610	1810	1940	1630	258	316	265	231
MIN	60	20	22	47	244	381	430	237	233	224	231	178
AC-FT	3710	1460	1980	18940	30650	60920	59460	40610	14200	15810	15280	12150

CAL YR 1977 TOTAL 48581 MEAN 133 MAX 378 MIN 20 AC-FT 96360
WTR YR 1978 TOTAL 138726 MEAN 380 MAX 1940 MIN 20 AC-FT 275200

NOTE.--No gage-height record Oct. 1 to Nov. 2.

14087400 CROOKED RIVER BELOW OPAL SPRINGS, NEAR CULVER, OR

LOCATION.--Lat 44°29'33", long 121°17'50", in NW¼NE¼ sec.33, T.12 S., R.12 E., Jefferson County, Hydrologic Unit 17070305, on right bank 0.2 mi (0.3 km) downstream from Opal Springs, 4.8 mi (7.7 km) southwest of Culver, and at mile 6.7 (10.8 km).

DRAINAGE AREA.--4,300 mi^2 (11,100 km^2), approximately, of which 500 mi^2 (1,300 km^2) is probably noncontributing.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,953.60 ft (595.457 m) National Geodetic Vertical Datum of 1929 (Portland General Electric Co. benchmark).

REMARKS.--Records excellent. Flow regulated since December 1960 by Prineville Reservoir (see station 14080400) and Ochoco Reservoir, capacity, 47,500 acre-ft (58.6 hm^3). Many diversions for irrigation above station. Practically all of the summer flow comes from Opal Springs and other springs within 15 mi (24 km) above station. Simultaneous records (1961-63) at former gaging station 5.6 mi (9.0 km) downstream indicated over 15 percent increase to summer flow from springs below this station.

AVERAGE DISCHARGE.--17 years, 1,545 ft^3/s (43.75 m^3/s), 1,119,000 acre-ft/yr (1.38 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,660 ft^3/s (189 m^3/s) Dec. 24, 1964, gage height, 9.36 ft (2.853 m); minimum, 912 ft^3/s (25.8 m^3/s) Aug. 13-15, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,770 ft^3/s (107 m^3/s) Apr. 27, gage height, 6.11 ft (1.862 m); minimum, 1,150 ft^3/s (32.6 m^3/s) June 2, 4-6, 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1260	1330	1270	1320	1730	1660	3180	3470	1180	1290	1200	1250
2	1380	1330	1300	1300	1720	1720	3260	3350	1150	1300	1190	1270
3	1350	1330	1300	1290	1740	1720	3260	3170	1160	1310	1180	1300
4	1350	1320	1300	1340	1870	1810	3330	3040	1150	1370	1160	1300
5	1350	1310	1270	1330	1840	1910	3170	2970	1150	1350	1190	1310
6	1340	1310	1280	1340	1670	1910	2700	2800	1150	1330	1210	1290
7	1340	1280	1290	1330	2220	2040	2300	2650	1160	1280	1190	1290
8	1380	1280	1290	1420	2930	2180	2050	2570	1150	1240	1180	1380
9	1370	1280	1320	1430	3140	2290	1940	2470	1160	1210	1180	1540
10	1360	1280	1300	1640	3110	2560	1940	1980	1190	1210	1170	1560
11	1360	1280	1290	1600	3050	3090	2030	1550	1170	1200	1180	1560
12	1360	1280	1290	1530	2340	3360	2210	1580	1160	1170	1200	1540
13	1350	1280	1290	1490	1940	3370	2270	1620	1170	1180	1190	1540
14	1350	1280	1290	1620	1920	3310	2150	1650	1170	1170	1210	1560
15	1350	1290	1540	1700	1910	2780	2030	1650	1180	1170	1230	1560
16	1340	1280	1590	1670	1890	2130	2050	1730	1200	1180	1250	1560
17	1340	1280	1420	1580	1890	1950	2070	1860	1200	1190	1270	1560
18	1330	1280	1380	1550	1730	1930	2070	1890	1180	1180	1280	1570
19	1250	1270	1340	1850	1600	1920	2060	1840	1180	1170	1320	1560
20	1230	1270	1370	2390	1600	1920	2040	1790	1170	1180	1310	1550
21	1230	1270	1360	2650	1610	1920	2010	1700	1210	1170	1320	1540
22	1230	1280	1370	2680	1610	1920	2000	1660	1200	1170	1370	1530
23	1230	1280	1340	2630	1620	1920	2000	1650	1190	1180	1390	1510
24	1210	1290	1340	2400	1620	2320	2010	1590	1210	1180	1340	1480
25	1180	1320	1340	2060	1620	3070	1850	1250	1260	1200	1300	1480
26	1190	1340	1350	1720	1620	2870	2130	1290	1270	1190	1310	1470
27	1190	1310	1340	1630	1610	2630	3460	1320	1270	1200	1300	1470
28	1220	1290	1330	1660	1600	2540	3710	1330	1270	1180	1300	1460
29	1370	1290	1330	1740	---	2670	3630	1330	1280	1180	1280	1440
30	1370	1280	1330	1740	---	2790	3600	1280	1350	1170	1250	1440
31	1340	---	1330	1730	---	2970	---	1200	---	1170	1240	---
TOTAL	40500	38790	41480	53360	54950	73180	74510	61230	35890	37670	38690	43870
MEAN	1306	1293	1338	1721	1963	2361	2484	1975	1196	1215	1248	1462
MAX	1380	1340	1590	2680	3140	3370	3710	3470	1350	1370	1390	1570
MIN	1180	1270	1270	1290	1600	1660	1850	1200	1150	1170	1160	1250
CFSM	.30	.30	.31	.40	.46	.55	.58	.46	.28	.28	.29	.34
IN.	.35	.34	.36	.46	.48	.63	.64	.53	.31	.33	.33	.38
AC-FT	80330	76940	82280	105800	109000	145200	147800	121400	71190	74720	76740	87020

CAL YR 1977 TOTAL 455080 MEAN 1247 MAX 1590 MIN 1160 CFSM .29 IN 3.94 AC-FT 902700
WTR YR 1978 TOTAL 594120 MEAN 1628 MAX 3710 MIN 1150 CFSM .38 IN 5.14 AC-FT 1178000

14088000 LAKE CREEK NEAR SISTERS, OR

LOCATION.--Lat 44°25'35", long 121°43'30", in NE¼SW¼ sec.24, T.13 S., R.8 E., Deschutes County, Hydrologic Unit 17070301, on left bank 300 ft (91 m) downstream from Suttle Lake and 13 mi (21 km) northwest of Sisters.

DRAINAGE AREA.--22.2 mi² (57.5 km²).

PERIOD OF RECORD.--June to November 1911, March to September 1912, May to October 1913, April 1915 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1124: 1943, 1947. WSP 1218: Drainage area. WSP 1448: 1916(M), 1925.

GAGE.--Water-stage recorder. Datum of gage is 3,431.68 ft (1,045.976 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 1, 1916, nonrecording gage at two sites 400 ft (122 m) upstream at different datums. Apr. 1, 1916, to Oct. 12, 1928, nonrecording gage or water-stage recorder at site 640 ft (195 m) downstream at different datum. Oct. 13, 1928, to Aug. 13, 1967, water-stage recorder at site 600 ft (183 m) downstream at datum 1.61 ft (0.491 m) lower.

REMARKS.--Records good except those for February and March, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--63 years (water years 1916-78), 52.8 ft³/s (1.495 m³/s), 38,250 acre-ft/yr (47.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded discharge, 556 ft³/s (15.7 m³/s) Dec. 15, 1977, gage height, 4.78 ft (1.457 m), but may have been higher during period of no gage-height record Dec. 23, 1964; minimum, 1.0 ft³/s (0.028 m³/s) Nov. 4, 5, 1940; minimum daily, 8 ft³/s (0.23 m³/s) Nov. 5, 1940, Oct. 6, 1942.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 556 ft³/s (15.7 m³/s) Dec. 15, gage height, 4.78 ft (1.457 m); minimum, 26 ft³/s (0.74 m³/s) Nov. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	43	117	77	50	43	59	56	41	38	28	29
2	29	42	108	75	50	45	61	55	41	36	28	30
3	29	38	134	77	51	47	63	54	40	35	29	31
4	28	34	187	74	52	49	64	54	40	34	29	29
5	29	35	179	75	53	50	64	52	40	33	28	31
6	29	33	161	76	53	50	61	52	39	34	28	31
7	31	31	153	71	53	50	60	50	38	37	29	30
8	30	30	155	69	50	51	58	48	38	37	29	29
9	29	30	139	66	48	52	56	48	38	34	29	31
10	28	30	124	62	45	52	55	50	39	32	29	36
11	28	31	123	58	44	52	53	53	38	32	28	34
12	29	31	121	55	45	50	52	51	38	32	29	31
13	29	32	157	54	46	50	53	54	37	32	29	30
14	29	39	279	53	48	49	52	53	37	32	29	30
15	29	40	492	52	47	51	52	55	39	33	30	29
16	29	33	524	52	46	59	52	55	38	32	32	29
17	29	32	420	51	48	60	52	53	37	31	30	30
18	30	34	303	51	50	64	50	52	38	31	29	31
19	29	34	223	50	52	62	45	52	37	31	29	29
20	29	34	182	48	52	60	42	52	37	31	29	29
21	29	34	160	47	53	58	45	51	37	32	29	29
22	29	44	143	47	54	58	49	48	36	33	30	29
23	30	44	129	49	54	58	50	47	35	32	29	29
24	31	49	121	52	54	60	48	45	35	30	32	29
25	35	68	112	52	51	63	50	43	35	30	32	29
26	33	69	107	52	48	64	56	43	34	33	30	30
27	31	113	101	51	46	64	52	45	33	32	30	29
28	30	121	95	51	44	63	55	45	34	30	30	29
29	33	119	91	52	---	61	56	43	35	30	30	28
30	38	115	88	51	---	59	56	42	35	30	29	29
31	37	---	82	50	---	58	---	42	---	28	29	---
TOTAL	937	1462	5510	1800	1387	1712	1621	1543	1119	1007	910	899
MEAN	30.2	48.7	178	58.1	49.5	55.2	54.0	49.8	37.3	32.5	29.4	30.0
MAX	38	121	524	77	54	64	64	56	41	38	32	36
MIN	28	30	82	47	44	43	42	42	33	28	28	28
AC-FT	1860	2900	10930	3570	2750	3400	3220	3060	2220	2000	1800	1780

CAL YR 1977 TOTAL 17327 MEAN 47.5 MAX 524 MIN 27 AC-FT 34370
WTR YR 1978 TOTAL 19907 MEAN 54.5 MAX 524 MIN 28 AC-FT 39490

NOTE.--No gage-height record Jan. 31 to Mar. 7.

14091500 METOLIUS RIVER NEAR GRANDVIEW, OR

LOCATION.--Lat 44°37'33", long 121°28'55", in SE¼SW¼ sec.12, T.11 S., R.10 E., Jefferson County, Hydrologic Unit 17070301, Deschutes National Forest, on right bank 1.0 mi (1.6 km) upstream from maximum controlled pool of Lake Billy Chinook, 15.0 mi (24.1 km) northwest of Culver, and at mile 13.6 (21.9 km).

DRAINAGE AREA.--316 mi^2 (818 km^2), at cableway 1.0 mi (1.6 km) downstream, where all discharge measurements are made. Hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--April 1910 to February 1912 (gage heights and discharge measurements only), March 1912 to December 1913, October 1921 to current year. Published as "at Hubbard's ranch, near Sisters" 1910, and as "at Hubbard's ranch, near Grandview" 1910-13.

REVISED RECORDS.--WSP 1448: 1913.

GAGE.--Water-stage recorder. Datum of gage is 1,974.36 ft (601.785 m) National Geodetic Vertical Datum of 1929 (levels by Portland General Electric Co.). Prior to Dec. 31, 1913, nonrecording gage at site 2.3 mi (3.7 km) upstream at different datum. Oct. 1, 1921, to May 3, 1949, nonrecording gage and May 4, 1949, to June 18, 1963, water-stage recorder at site 2.7 mi (4.3 km) downstream at datum 64 ft (19.5 m) lower.

REMARKS.--Records excellent. No regulation. Many small diversions for irrigation above station. Stream is spring fed. Records herein are for measuring site.

AVERAGE DISCHARGE.--58 years (water years 1913, 1922-78), 1,498 ft^3/s (42.42 m^3/s), 1,085,000 acre-ft/yr (1.34 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,530 ft^3/s (213 m^3/s) Dec. 24, 1964, gage height, 6.81 ft (2.076 m); minimum, 1,080 ft^3/s (30.6 m^3/s) Feb. 17, 1932, Oct. 2-31, Nov. 6, 7, 10-14, 1942.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,350 ft^3/s (123 m^3/s) Dec. 13, gage height, 4.46 ft (1.359 m); minimum, 1,220 ft^3/s (34.6 m^3/s) Oct. 20, 21, Nov. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1260	1300	1630	1570	1480	1480	1490	1390	1400	1430	1310	1280
2	1250	1400	2140	1550	1520	1470	1480	1390	1410	1410	1300	1280
3	1250	1300	2320	1560	1590	1470	1480	1380	1420	1400	1300	1290
4	1250	1280	1960	1560	1580	1470	1460	1380	1440	1390	1310	1290
5	1250	1280	1830	1590	1590	1460	1460	1370	1450	1380	1310	1300
6	1250	1260	1880	1580	1620	1450	1450	1360	1490	1380	1300	1300
7	1280	1260	1870	1560	1680	1450	1440	1360	1490	1400	1300	1280
8	1260	1250	1750	1560	1690	1470	1430	1370	1470	1410	1300	1280
9	1250	1250	1690	1590	1670	1480	1410	1380	1480	1390	1300	1300
10	1240	1250	1680	1570	1630	1460	1410	1410	1470	1380	1290	1320
11	1240	1250	1820	1570	1610	1450	1420	1410	1450	1370	1300	1310
12	1240	1250	1800	1570	1590	1450	1400	1390	1430	1360	1300	1280
13	1240	1250	3120	1590	1570	1450	1400	1430	1410	1350	1300	1280
14	1240	1320	3920	1580	1560	1440	1400	1460	1400	1350	1280	1270
15	1240	1490	3470	1580	1530	1430	1390	1460	1390	1360	1300	1270
16	1240	1360	2800	1590	1520	1430	1390	1420	1370	1380	1310	1260
17	1240	1300	2500	1610	1500	1430	1380	1400	1370	1370	1290	1260
18	1240	1290	2260	1610	1500	1440	1370	1400	1380	1340	1280	1260
19	1240	1280	2060	1610	1490	1440	1370	1420	1400	1330	1280	1250
20	1230	1250	1940	1580	1490	1450	1360	1450	1390	1330	1290	1250
21	1230	1250	1870	1590	1490	1450	1360	1460	1400	1330	1300	1250
22	1230	1260	1810	1580	1490	1450	1370	1440	1390	1320	1300	1250
23	1240	1290	1780	1560	1490	1480	1360	1410	1390	1320	1290	1250
24	1240	1400	1770	1530	1500	1460	1360	1400	1380	1330	1310	1250
25	1290	2390	1730	1530	1500	1470	1380	1380	1370	1340	1330	1250
26	1270	2360	1690	1510	1500	1470	1440	1370	1370	1370	1290	1250
27	1250	1740	1660	1500	1490	1480	1410	1390	1370	1360	1280	1250
28	1250	1670	1650	1490	1490	1490	1400	1430	1380	1330	1280	1250
29	1260	1840	1630	1490	---	1480	1400	1420	1380	1310	1280	1250
30	1300	1700	1620	1470	---	1490	1400	1400	1410	1310	1280	1240
31	1270	---	1590	1470	---	1490	---	1390	---	1310	1280	---
TOTAL	38760	42770	63240	48300	43360	45300	42270	43520	42350	42140	40170	38100
MEAN	1250	1426	2040	1558	1549	1461	1409	1404	1412	1359	1296	1270
MAX	1300	2390	3920	1610	1690	1490	1490	1460	1490	1430	1330	1320
MIN	1230	1250	1590	1470	1480	1430	1360	1360	1370	1310	1280	1240
CFSM	3.96	4.51	6.46	4.93	4.90	4.62	4.46	4.44	4.47	4.30	4.10	4.02
IN.	4.56	5.03	7.44	5.69	5.10	5.33	4.98	5.12	4.99	4.96	4.73	4.49
AC-FT	76880	84830	125400	95800	86000	89850	83840	86320	84000	83580	79680	75570

CAL YR 1977 TOTAL 508480 MEAN 1393 MAX 3920 MIN 1230 CFSM 4.41 IN 59.86 AC-FT 1009000
WTR YR 1978 TOTAL 530280 MEAN 1453 MAX 3920 MIN 1230 CFSM 4.60 IN 62.43 AC-FT 1052000

14092100 LAKE BILLY CHINOOK NEAR METOLIUS, OR

LOCATION.--Lat 44°36'14", long 121°16'40", in SW¼NE¼ sec.22, T.11 S., R.12 E., Jefferson County, Hydrologic Unit 17070301, Warm Springs Indian Reservation, near left end of Round Butte Dam on Deschutes River, 5.0 mi (8.0 km) west of Metolius, and at mile 110.6 (178.0 km).

DRAINAGE AREA.--7,490 mi^2 (19,400 km^2), approximately.

PERIOD OF RECORD.--January 1964 to current year.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Portland General Electric Co.).

REMARKS.--Reservoir is formed by rockfill dam completed in June 1964 by Portland General Electric Co.; storage began Jan. 2, 1964. Total capacity is 534,700 acre-ft (659 hm^3) at elevation 1,945.0 ft (592.84 m) proposed upper limit of operation, and usable capacity is 273,900 acre-ft (337 hm^3) between elevations 1,860.0 ft (566.93 m), proposed lower limit of operation, and 1,945.0 ft (592.84 m). Reservoir used for power generation under FPC license 2030. Figures given herein represent total contents.

COOPERATION.--Gage readings and capacity table furnished by Portland General Electric Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 538,700 acre-ft (664 hm^3) July 15, 16, 1972, elevation, 1,946.00 ft (593.141 m); minimum observed since first filling, 431,100 acre-ft (531 hm^3) Feb. 13, 1972, elevation, 1,917.13 ft (584.341 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 534,800 acre-ft (659 hm^3) Oct. 7, 8, elevation, 1,945.01 ft (592.839 m); minimum observed, 490,500 acre-ft (605 hm^3) Feb. 22, elevation, 1,933.49 ft (589.328 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30	1,944.58	533,100	-
Oct. 31	1,944.60	533,200	+100
Nov. 30	1,943.25	527,800	-5,400
Dec. 31	1,941.48	520,900	-6,900
CAL YR 1977	-	-	-9,800
Jan. 31	1,933.70	491,300	-20,600
Feb. 28	1,933.80	491,700	+400
Mar. 31	1,943.58	529,100	+37,400
Apr. 30	1,942.90	526,500	-2,600
May 31	1,943.36	528,300	+1,800
June 30	1,944.63	533,300	+5,000
July 31	1,944.36	532,200	-1,100
Aug. 31	1,944.48	532,700	+500
Sept.30	1,944.56	533,000	+300
WTR YR 1978	-	-	-100

14092500 DESCHUTES RIVER NEAR MADRAS, OR

LOCATION.--Lat 44°43'34", long 121°14'45", in SE¼SW¼ sec.1, T.10 S., R.12 E., Jefferson County, Hydrologic Unit 17070306, on right bank 400 ft (122 m) downstream from reregulating dam, 2.7 mi (4.3 km) downstream from Pelton Dam, 8.5 mi (13.7 km) northwest of Madras, and at mile 100.1 (161.1 km).

DRAINAGE AREA.--7,820 mi^2 (20,250 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1923 to current year.

REVISED RECORDS.--WSP 1398: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,390.25 ft (423.748 m) National Geodetic Vertical Datum of 1929 (levels by Portland General Electric Co.). See WSP 1738 for history of changes prior to Nov. 23, 1957.

REMARKS.--Water-discharge records excellent. Diurnal fluctuation caused by Lake Simtustus and reregulating reservoir since 1957, combined capacity for normal operation, 6,500 acre-ft (8.01 hm^3). Some winter and spring runoff stored in Ochoco Reservoir, capacity, 47,500 acre-ft (58.6 hm^3), in Crescent Lake, Crane Prairie and Wickiup Reservoirs, combined capacity, 354,600 acre-ft (437 hm^3), and since 1960, in Prineville Reservoir, capacity, 152,800 acre-ft (188 hm^3), and since 1964, in Lake Billy Chinook, capacity, 534,700 acre-ft (659 hm^3). Large diversions in upper basin for irrigation.

AVERAGE DISCHARGE.--55 years, 4,479 ft^3/s (126.8 m^3/s), 3,245,000 acre-ft/yr (4.00 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft^3/s (447 m^3/s) Dec. 28, 1964, gage height, 6.29 ft (1.917 m); maximum gage height, 6.89 ft (2.100 m) Jan. 1, 1943, site and datum then in use; minimum discharge, 1,200 ft^3/s (34.0 m^3/s) Dec. 13, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,600 ft^3/s (300 m^3/s) Dec. 16, gage height, 5.00 ft (1.524 m); minimum, 3,390 ft^3/s (96.0 m^3/s) July 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3900	4200	5210	5350	5680	4920	5960	6050	3660	4130	3800	3900
2	3940	4110	5110	5320	5380	5000	6160	6160	3690	4180	3710	3920
3	3940	4130	5110	5820	5210	5000	6660	5820	3710	4200	3710	3900
4	3970	4130	6020	6190	5210	5000	6630	5660	3730	4080	3690	3940
5	3920	4160	5800	6160	5190	4970	6510	5380	3730	4130	3730	3850
6	3940	4130	5000	6540	5570	4920	6540	5240	3830	4160	3690	4080
7	4010	4380	4870	7020	5570	4710	6600	5130	3730	4040	3690	4060
8	4040	4480	5290	7050	5660	4710	6570	5190	3600	3920	3730	3850
9	4110	4400	5380	6990	6020	4630	6540	5320	3780	3870	3780	3830
10	4230	4400	5000	6510	6190	4790	6110	5130	3870	3900	3830	3800
11	4330	4400	4810	5430	6140	4920	5490	4600	3870	3850	3800	4230
12	4300	4430	4920	5320	6160	4940	4920	4450	3920	3760	3800	4130
13	4180	4430	5910	5320	6160	5910	4920	4280	3920	3550	3800	3970
14	4080	4430	8050	5290	5820	6310	5160	4130	3900	3510	3870	3970
15	4060	4500	9940	5050	5680	6450	4970	4130	3920	3530	3920	4040
16	4040	4430	10400	4500	5320	6250	5210	4180	3920	3850	3900	3970
17	4010	4430	9110	4940	5380	5800	5520	4110	3900	4060	3730	3940
18	3870	4430	8540	5630	5320	5570	4450	4130	3900	3970	3780	4040
19	3800	4430	7350	6160	5350	5210	4160	4130	3800	3780	3940	4010
20	3830	4380	6510	6370	5290	5020	4040	4250	3830	3660	3900	4010
21	3830	4890	5710	6370	5680	4730	3940	4500	3780	3730	3990	4010
22	3800	5020	5630	6370	5770	4040	3940	4330	3760	3830	3900	4040
23	3800	4970	5630	6420	5190	3620	3970	4110	3710	3830	3920	3990
24	3830	5160	5350	6570	5050	3800	3920	4130	3660	3830	4010	4040
25	3830	5290	5320	6370	5020	3990	4450	4080	3710	3710	3990	4250
26	3800	6480	5270	6110	5000	4010	4890	4060	3920	3620	4060	3990
27	3800	6570	5050	5630	4940	4060	5570	4040	3940	3730	3940	3850
28	3800	5910	5050	5190	5000	4010	6160	4040	3920	3870	3970	3850
29	3800	5320	5000	5240	---	4600	6220	4060	4080	3940	3920	3900
30	3850	5240	4940	5400	---	5570	5990	3870	4180	3830	3900	3710
31	4300	---	5240	5630	---	6050	---	3730	---	3900	3900	---
TOTAL	122940	141660	186520	182260	153950	153510	162170	142420	114870	119950	119300	119070
MEAN	3966	4722	6017	5879	5498	4952	5406	4594	3829	3869	3848	3969
MAX	4330	6570	10400	7050	6190	6450	6660	6160	4180	4200	4060	4250
MIN	3800	4110	4810	4500	4940	3620	3920	3730	3600	3510	3690	3710
AC-FT	243900	281000	370000	361500	305400	304500	321700	282500	227800	237900	236600	236200

CAL YR 1977 TOTAL 1572300 MEAN 4308 MAX 10400 MIN 3280 AC-FT 3119000
WTR YR 1978 TOTAL 1718620 MEAN 4709 MAX 10400 MIN 3510 AC-FT 3409000

14092500 DESCHUTES RIVER NEAR MADRAS, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1971 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES. Maximum, 18.0°C occurred during period Aug. 1 to Sept. 30, 1974; minimum, 4.5°C Jan. 23, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 12.5°C July 6, 8-11; minimum recorded, 5.5°C Feb. 28.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1									---	---	6.0	6.0
2									---	---	6.0	6.0
3									---	---	6.0	6.0
4									---	---	6.0	6.0
5									---	---	6.0	6.0
6									---	---	6.0	6.0
7									---	---	6.0	6.0
8									---	---	6.0	6.0
9									---	---	6.0	6.0
10									---	---	6.0	6.0
11									---	---	6.0	6.0
12									---	---	6.5	6.0
13									---	---	6.5	6.0
14									---	---	6.5	6.0
15									---	---	6.5	6.0
16									6.0	6.0	6.5	6.0
17									6.0	6.0	6.5	6.0
18									6.0	6.0	6.5	6.0
19									6.0	6.0	6.5	6.0
20									6.0	6.0	6.5	6.0
21									6.0	6.0	6.5	6.0
22									6.0	6.0	6.5	6.0
23									6.0	6.0	6.5	6.5
24									6.0	6.0	7.0	6.5
25									6.0	6.0	7.0	7.0
26									6.0	6.0	7.0	6.5
27									6.0	6.0	7.0	6.5
28									6.0	5.5	7.0	6.5
29									---	---	7.0	6.5
30									---	---	7.0	6.5
31									---	---	7.0	6.5
MONTH									6.0	5.5	7.0	6.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	6.5	8.5	8.0	10.0	9.5	12.0	11.5				
2	7.0	7.0	8.5	8.0	10.0	10.0	12.0	11.5				
3	7.0	7.0	8.5	8.0	10.0	10.0	12.0	11.5				
4	7.0	7.0	8.5	8.0	10.0	10.0	12.0	11.5				
5	7.0	7.0	8.5	8.0	10.0	10.0	12.0	11.5				
6	7.0	6.5	8.5	8.0	10.0	10.0	12.5	11.5				
7	7.0	6.5	8.5	8.5	10.5	10.0	12.0	11.5				
8	7.0	7.0	9.0	8.5	10.5	10.0	12.5	11.5				
9	7.0	7.0	9.0	8.5	10.5	10.0	12.5	11.5				
10	7.0	7.0	9.0	8.5	10.5	10.0	12.5	11.5				
11	7.0	7.0	9.0	9.0	10.5	10.0	12.5	11.5				
12	7.5	7.0	9.0	9.0	10.5	10.0	---	---				
13	7.5	7.0	9.0	9.0	10.5	10.0	---	---				
14	7.5	7.0	9.0	9.0	10.5	10.0	---	---				
15	8.0	7.0	9.0	8.5	10.5	10.0	---	---				
16	8.0	7.0	9.0	9.0	10.5	10.0	---	---				
17	8.0	7.0	9.0	8.5	10.5	10.0	---	---				
18	8.0	7.0	9.0	9.0	10.5	10.5	---	---				
19	7.5	7.0	9.5	9.0	10.5	10.5	---	---				
20	8.0	7.5	9.5	9.0	11.0	10.5	---	---				
21	8.0	7.5	9.5	9.0	11.0	10.5	---	---				
22	8.0	8.0	9.5	9.0	12.0	11.0	---	---				
23	8.0	8.0	9.5	9.0	11.5	11.0	---	---				
24	8.0	8.0	9.5	9.0	11.5	11.0	---	---				
25	8.0	8.0	9.5	9.0	12.0	10.5	---	---				
26	8.0	8.0	9.5	9.0	12.0	11.0	---	---				
27	8.0	8.0	9.5	9.0	12.0	11.0	---	---				
28	8.0	8.0	9.5	9.5	12.0	11.0	---	---				
29	8.0	8.0	10.0	9.5	12.0	11.5	---	---				
30	8.0	8.0	10.0	9.5	12.0	11.5	---	---				
31	---	---	10.0	9.5	---	---	---	---				
MONTH	8.0	6.5	10.0	8.0	12.0	9.5	12.5	11.5				

14092885 SHITIKE CREEK BELOW WOLFORD CANYON, NEAR WARM SPRINGS, OR

LOCATION.--Lat 44°46'20", long 121°18'15", in NW¼SE¼ sec.21, T.9 S., R.12 E., Jefferson County, Hydrologic Unit 17070306, Warm Springs Indian Reservation, on left bank at bridge crossing 2.3 mi (3.7 km) upstream from Tenino Creek, and 2.1 mi (3.4 km) northwest of Warm Springs.

DRAINAGE AREA.--75.8 mi^2 (196.3 km^2).

PERIOD OF RECORD.--October 1974 to current year. Records for June 1911 to October 1916, April 1923 to September 1928, and October 1972 to September 1974 (see station 14093000) at sites downstream not equivalent owing to difference in drainage areas.

GAGE.--Water-stage recorder. Altitude of gage is 1,600 ft (488 m), from topographic map.

REMARKS.--Records good. No regulation. Some diversion for irrigation and Warm Springs water supply.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,350 ft^3/s (38.2 m^3/s) Dec. 13, 1977, gage height, 7.35 ft (2.240 m); minimum, 19 ft^3/s (0.54 m^3/s) Sept. 26-30, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft^3/s (11.3 m^3/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
Nov. 26	0030	1,220	34.6	7.11	2.167	Dec. 13	2100	*1,350	38.2	*7.35	2.240
Dec. 2	2330	942	26.7	6.57	2.003						

Minimum, 19 ft^3/s (0.54 m^3/s) Sept. 26-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	54	159	56	49	61	124	57	57	71	29	26
2	47	108	397	53	53	58	104	56	63	61	29	25
3	46	78	585	56	69	56	78	56	68	58	28	24
4	43	65	318	65	73	54	71	56	73	54	27	25
5	42	58	216	57	79	51	68	54	86	54	26	27
6	42	56	218	57	100	50	65	50	95	51	26	30
7	46	54	251	51	122	53	60	47	88	50	25	28
8	53	53	185	53	120	54	57	45	84	51	25	26
9	47	50	148	60	114	63	53	51	84	51	24	28
10	45	49	135	60	97	60	51	66	81	49	23	35
11	42	47	208	57	83	61	53	66	71	46	23	44
12	42	47	249	56	73	60	53	61	71	42	25	36
13	40	46	802	58	63	57	53	61	66	42	28	30
14	40	49	904	58	58	54	51	110	60	42	28	28
15	39	124	565	60	56	54	50	108	56	43	28	26
16	39	122	315	66	51	53	49	76	53	47	34	25
17	38	86	251	69	47	53	47	65	53	45	31	24
18	38	74	200	68	47	56	46	60	57	39	29	25
19	36	66	169	68	51	60	45	63	63	39	27	24
20	36	57	141	65	50	66	43	78	61	36	28	24
21	36	50	128	65	50	69	43	91	63	36	34	23
22	36	56	114	61	53	71	42	86	63	35	33	22
23	36	58	104	56	58	91	42	68	60	34	33	22
24	36	86	98	53	66	106	40	60	57	33	34	21
25	43	546	91	51	68	98	42	54	54	33	45	21
26	60	723	84	51	69	89	56	51	56	35	36	21
27	51	290	76	49	69	95	66	50	54	36	31	20
28	47	195	71	49	65	104	66	74	57	33	29	20
29	49	260	68	49	---	120	63	73	57	31	27	20
30	57	224	63	49	---	126	60	61	63	30	27	20
31	56	---	60	47	---	130	---	57	---	29	27	---
TOTAL	1358	3831	7373	1773	1953	2233	1741	2011	1974	1336	899	770
MEAN	43.8	128	238	57.2	69.8	72.0	58.0	64.9	65.8	43.1	29.0	25.7
MAX	60	723	904	69	122	130	124	110	95	71	45	44
MIN	36	46	60	47	47	50	40	45	53	29	23	20
CFSM	.58	1.69	3.14	.76	.92	.95	.77	.86	.87	.57	.38	.34
IN.	.67	1.88	3.62	.87	.96	1.10	.85	.99	.97	.66	.44	.33
AC-FT	2690	7600	14620	3520	3870	4430	3450	3990	3920	2650	1780	1530

CAL YR 1977 TOTAL 25223 MEAN 69.1 MAX 904 MIN 30 CFSM .91 IN 12.38 AC-FT 50030
WTR YR 1978 TOTAL 27252 MEAN 74.7 MAX 904 MIN 20 CFSM .99 IN 13.37 AC-FT 54050

14097100 WARM SPRINGS RIVER NEAR KAHNEETA HOT SPRINGS, OR

LOCATION.--Lat 44°51'24", long 121°08'55", in SE¼SW¼ sec.23, T.8 S., R.13 E., Wasco County, Hydrologic Unit 17070306, Warm Springs Indian Reservation, on right bank at mile 4.6 (7.4 km).

DRAINAGE AREA.--526 mi^2 (1,362 km^2).

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,400 ft (427 m), from topographic map.

REMARKS.--Records good except those for period Apr. 13 to Sept. 6, which are poor. No regulation. Diversions above station.

AVERAGE DISCHARGE.--6 years, 450 ft^3/s (12.74 m^3/s), 11.62 in/yr (295 mm/yr), 326,000 acre-ft/yr (402 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,540 ft^3/s (185 m^3/s) Dec. 15, 1977, gage height, 8.86 ft (2.701 m); minimum, 189 ft^3/s (5.35 m^3/s) Aug. 18, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,700 ft^3/s (48.1 m^3/s) and maximum discharge, 6,540 ft^3/s (185 m^3/s) Dec. 15, gage height, 8.86 ft (2.701 m); minimum daily, 195 ft^3/s (5.52 m^3/s) Jan. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	231	249	582	280	280	685	651	410	310	275	230	235
2	220	274	662	250	290	651	624	405	315	265	230	240
3	217	289	1540	300	305	619	603	400	320	250	230	245
4	213	263	1110	320	390	613	577	395	325	245	225	250
5	213	256	851	300	500	603	561	390	340	240	220	260
6	213	249	743	280	600	592	550	380	350	235	220	270
7	217	242	845	270	700	668	535	375	355	230	220	260
8	220	238	738	280	820	656	510	370	345	230	220	245
9	217	238	640	295	900	738	490	365	335	230	225	249
10	213	234	592	310	840	645	480	360	325	230	230	260
11	213	234	869	290	820	634	475	360	320	225	230	256
12	213	234	1280	270	780	624	470	355	310	220	235	256
13	213	231	2520	275	760	603	470	380	295	220	240	256
14	213	234	4870	285	738	587	460	400	290	230	240	260
15	213	263	4730	295	691	566	465	390	300	235	245	252
16	213	289	2830	310	640	556	450	365	300	240	250	252
17	213	271	2230	320	634	556	445	355	290	240	255	249
18	213	263	1650	300	651	571	440	335	290	235	250	252
19	213	260	1250	290	773	587	430	330	295	230	240	252
20	213	224	1100	275	767	613	420	340	285	230	245	249
21	213	242	900	265	738	634	420	355	280	225	250	252
22	213	242	800	265	755	645	415	345	275	220	250	252
23	213	260	700	260	749	680	410	335	270	220	240	249
24	217	260	610	260	863	714	405	330	275	225	250	249
25	220	485	540	230	832	691	410	315	270	230	270	249
26	234	1320	490	220	802	674	430	310	270	230	275	249
27	231	962	440	215	773	674	440	320	265	235	265	245
28	227	680	400	205	714	674	445	335	260	235	255	245
29	227	691	370	195	---	668	435	325	255	225	245	245
30	249	726	340	205	---	662	420	315	265	230	240	245
31	263	---	300	210	---	662	---	310	---	230	240	---
TOTAL	6811	10903	37522	8325	19105	19745	14336	11055	8980	7240	7460	7528
MEAN	220	363	1210	269	682	637	478	357	299	234	241	251
MAX	263	1320	4870	320	900	738	651	410	355	275	275	270
MIN	213	224	300	195	280	556	405	310	255	220	220	235
CFSM	.42	.69	2.30	.51	1.30	1.21	.91	.68	.57	.45	.46	.48
IN.	.48	.77	2.65	.59	1.35	1.40	1.01	.78	.64	.51	.53	.53
AC-FT	13510	21630	74420	16510	37890	39160	28440	21930	17810	14360	14800	14930

CAL YR 1977 TOTAL 123581 MEAN 339 MAX 4870 MIN 203 CFSM .64 IN 8.74 AC-FT 245100
WTR YR 1978 TOTAL 159010 MEAN 436 MAX 4870 MIN 195 CFSM .83 IN 11.25 AC-FT 315400

NOTE.--No gage-height record Apr. 13 to Sept. 6.

14097200 WHITE RIVER NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°10'40", long 121°34'30", in NE¼SW¼ sec.32, T.4 S., R.10 E., Wasco County, Hydrologic Unit 17070306, in Mount Hood National Forest, on left bank at Faith Spring, 1.4 mi (2.3 km) above Klip Creek, and at mile 33.3 (53.6 km).

DRAINAGE AREA.--40.7 mi^2 (105.4 km^2).

PERIOD OF RECORD.--July 1969 to current year.

REVISED RECORDS.--WRD Oreg. 1972: 1970.

GAGE.--Water-stage recorder. Altitude of gage is 2,740 ft (835 m) from topographic map.

REMARKS.--Records fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--9 years, 172 ft^3/s (4.871 m^3/s), 57.39 in/yr (1,458 mm/yr), 124,600 acre-ft/yr (154 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,650 ft^3/s (103 m^3/s) Dec. 13, 1977, gage height, 6.63 ft (2.021 m); minimum, 20 ft^3/s (0.57 m^3/s) Jan. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft^3/s (17.0 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2000	1,490	42.2	5.07	1.545
Nov. 29	0700	866	24.5	4.31	1.314
Dec. 2	1630	2,950	83.5	6.28	1.914
Dec. 6	2030	660	18.7	3.98	1.213
Dec. 13	1630	*3,650	103	*6.63	2.021

Minimum, 79 ft^3/s (2.24 m^3/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	238	531	141	137	166	215	161	161	163	127	121
2	94	286	1680	144	148	161	203	163	161	163	125	121
3	85	244	1030	144	168	156	188	158	161	163	123	123
4	84	234	620	137	166	151	179	161	161	163	123	125
5	84	209	440	139	174	146	174	153	166	163	123	125
6	87	206	540	141	197	141	163	153	166	161	119	127
7	111	241	491	130	225	144	156	151	161	163	119	125
8	117	241	388	146	234	151	151	151	158	161	119	123
9	115	254	335	146	225	148	148	156	163	156	117	132
10	117	265	376	139	200	146	153	156	168	156	115	144
11	121	268	568	134	188	146	156	171	177	153	113	148
12	119	272	611	141	177	141	148	163	158	148	117	146
13	121	282	2260	146	168	141	144	185	156	148	117	151
14	123	331	1840	146	163	134	141	194	156	146	115	161
15	121	384	1420	151	156	130	139	185	158	146	121	166
16	117	293	942	148	148	132	141	179	156	158	139	171
17	115	297	700	156	144	139	137	174	156	158	132	182
18	113	305	531	156	144	151	134	177	158	151	119	215
19	115	324	440	151	148	161	134	177	158	146	113	228
20	119	331	380	153	151	177	137	182	158	144	119	241
21	123	331	335	166	156	191	134	182	158	144	132	215
22	125	272	285	161	161	206	134	185	158	141	127	179
23	134	290	244	151	166	251	132	174	158	139	121	174
24	139	416	209	146	188	244	134	168	161	139	125	166
25	141	907	194	146	185	241	146	166	161	137	134	158
26	144	907	174	151	191	244	168	166	161	141	127	153
27	146	554	166	141	182	248	177	174	161	148	121	148
28	146	448	158	144	174	244	179	171	161	139	121	144
29	148	655	153	139	---	244	171	166	161	132	121	141
30	212	491	146	134	---	248	168	161	163	127	123	139
31	200	---	141	134	---	231	---	161	---	127	123	---
TOTAL	3830	10776	18369	4502	4864	5554	4684	5224	4820	4624	3790	4692
MEAN	124	359	593	145	174	179	156	169	161	149	122	156
MAX	212	907	2260	166	234	251	215	194	177	163	139	241
MIN	84	206	141	130	137	130	132	151	156	127	113	121
CFSM	3.05	8.82	14.6	3.56	4.28	4.40	3.83	4.15	3.96	3.66	3.00	3.83
IN.	3.50	9.85	16.79	4.11	4.45	5.08	4.28	4.77	4.41	4.23	3.46	4.29
AC-FT	7600	21370	36430	8930	9650	11020	9290	10360	9560	9170	7520	9310

CAL YR 1977 TOTAL 55023 MEAN 151 MAX 2260 MIN 34 CFSM 3.71 IN 50.29 AC-FT 109100
WTR YR 1978 TOTAL 75729 MEAN 207 MAX 2260 MIN 84 CFSM 5.09 IN 69.21 AC-FT 150200

14101500 WHITE RIVER BELOW TYGH VALLEY, OR

LOCATION.--Lat 45°14'30", long 121°05'38", in NE¼NE¼ sec.7, T.4 S., R.14 E., Wasco County, Hydrologic Unit 17070306, on left bank 200 ft (61 m) downstream from former Pacific Power & Light Co. powerplant at White River Falls, 3.9 mi (6.3 km) east of town of Tygh Valley, and at mile 2.0 (3.2 km).

DRAINAGE AREA.--417 mi² (1,080 km²).

PERIOD OF RECORD.--October 1917 to current year.

REVISED RECORDS.--WSP 1448: 1920, 1923, 1927-28, drainage area. WSP 1935: 1956.

GAGE.--Water-stage recorder. Datum of gage is 870.15 ft (265.222 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.). Prior to July 28, 1931, at site 750 ft (229 m) downstream at different datum. July 28, 1931, to Sept. 30, 1954, at site 700 ft (213 m) downstream at different datums.

REMARKS.--Records fair. No regulation. Diversions above station for irrigation.

AVERAGE DISCHARGE.--61 years, 429 ft³/s (12.15 m³/s), 310,800 acre-ft/yr (383 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,300 ft³/s (377 m³/s) Jan. 6, 1923, gage height, about 13.3 ft (4.05 m), site and datum then in use, from rating curve extended above 5,000 ft³/s (142 m³/s); minimum, 7.5 ft³/s (0.21 m³/s) Aug. 31, 1961.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,600 ft³/s (45.3 m³/s) and maximum discharge, 8,190 ft³/s (232 m³/s) Dec. 13, gage height, 10.00 ft (3.048 m); minimum, 81 ft³/s (2.29 m³/s) Oct. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	119	830	342	484	701	718	383	248	157	113	124
2	102	150	4700	346	559	662	668	370	251	157	111	122
3	98	155	3000	366	818	630	635	358	248	165	111	135
4	96	120	1850	405	824	620	599	334	245	163	113	145
5	93	100	1270	400	843	599	579	330	241	155	113	147
6	90	106	970	450	984	589	554	323	231	147	111	152
7	91	110	1340	427	1120	589	525	315	218	142	109	145
8	98	112	1040	474	1180	604	499	304	221	145	109	135
9	98	114	840	559	1220	599	470	304	221	140	105	140
10	95	115	780	673	1050	589	470	307	241	142	103	157
11	91	116	1200	625	947	594	484	300	241	140	105	155
12	90	117	1520	574	855	574	446	307	228	135	109	145
13	89	118	6400	579	800	564	418	307	208	135	115	140
14	88	119	4400	614	752	540	400	366	208	133	113	142
15	87	250	3300	837	723	514	392	362	208	133	117	135
16	86	400	2650	887	657	504	423	342	199	155	138	133
17	85	282	2150	894	625	509	414	319	190	152	131	135
18	85	248	1750	788	604	554	405	307	193	142	111	145
19	84	230	1430	875	604	589	392	304	182	135	109	140
20	83	220	1190	782	604	635	392	307	173	128	122	133
21	82	222	1040	758	604	673	362	311	168	128	142	131
22	81	222	907	735	620	712	350	307	165	126	126	128
23	81	208	812	614	635	800	342	296	163	119	113	128
24	83	190	752	559	735	824	334	286	163	119	126	128
25	85	540	701	544	812	788	346	279	160	115	155	128
26	90	1800	620	544	806	788	418	272	157	119	145	128
27	91	1200	559	504	788	794	427	282	155	133	135	124
28	90	840	514	494	746	788	414	282	155	119	131	117
29	91	660	484	499	---	782	405	272	163	113	128	117
30	98	900	455	470	---	782	396	262	157	113	128	119
31	113	---	418	465	---	758	---	255	---	113	124	---
TOTAL	2818	10083	49872	18083	21999	20248	13677	9653	6001	4218	3721	4053
MEAN	90.9	336	1609	583	786	653	456	311	200	136	120	135
MAX	113	1800	6400	894	1220	824	718	383	251	165	155	157
MIN	81	100	418	342	484	504	334	255	155	113	103	117
AC-FT	5590	20000	98920	35870	43640	40160	27130	19150	11900	8370	7380	8040

CAL YR 1977 TOTAL 101587 MEAN 278 MAX 6400 MIN 69 AC-FT 201500
WTR YR 1978 TOTAL 164426 MEAN 450 MAX 6400 MIN 81 AC-FT 326100

14103000 DECHUTES RIVER AT MOODY, NEAR BIGGS, OR
(National stream-quality accounting network station)

LOCATION.--Lat 45°37'20", long 120°54'05", in SW¼SE¼ sec.26, T.2 N., R.15 E., Sherman County, Hydrologic Unit 17070306, on right bank at Moody, 4.0 mi (6.4 km) southwest of Biggs, and at mile 1.4 (2.3 km).

DRAINAGE AREA.--10,500 mi^2 (27,200 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1897 to December 1899 (published as "near Moro"), July 1906 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 754: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 167.54 ft (51.066 m) National Geodetic Vertical Datum of 1929. Oct. 19, 1897, to Dec. 31, 1899, nonrecording gage at site 10 mi (16 km) upstream at different datum. July 22, 1906, to July 18, 1930, nonrecording gage at site 300 ft (91 m) downstream at datum 0.50 ft (0.152 m) lower.

REMARKS.--Water-discharge records excellent. Some fluctuation caused by regulation at Lake Simtustus since 1957. Some winter and spring runoff stored in Ochoco Reservoir, capacity, 46,420 acre-ft (57.2 hm^3), in Crescent Lake, Crane Prairie and Wickiup Reservoirs, combined capacity, 323,390 acre-ft (399 hm^3), and since 1960, in Prineville Reservoir (see station 14080400), and since 1964 in Lake Billy Chinook (see station 14092100). Large diversions in upper river basin for irrigation.

AVERAGE DISCHARGE.--74 years, 5,827 ft^3/s (165.0 m^3/s), 4,222,000 acre-ft/yr (5.21 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,500 ft^3/s (2,140 m^3/s) Dec. 22, 1964, gage height, 11.80 ft (3.597 m), from rating curve extended above 47,000 ft^3/s (1,330 m^3/s); minimum, 2,400 ft^3/s (68.0 m^3/s) Dec. 5, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,900 ft^3/s (705 m^3/s) Dec. 15, gage height, 7.07 ft (2.155 m); minimum, 3,940 ft^3/s (112 m^3/s) July 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4420	4750	6930	6320	7270	6930	7980	7520	4480	5030	4420	4420
2	4360	4690	7240	6180	7240	6830	7800	7590	4450	5840	4270	4420
3	4390	4750	10100	6220	7800	6790	8230	7550	4450	5120	4210	4450
4	4360	4660	9060	7000	7940	6760	8410	7000	4540	5000	4180	4450
5	4360	4600	8700	7200	7730	6690	8270	6900	4510	4840	4180	4480
6	4300	4570	7760	7380	8450	6730	8160	6520	4540	4840	4180	4390
7	4360	4570	7310	8230	8990	6620	8160	6420	4600	4840	4150	4780
8	4450	4870	7000	8410	10300	6560	8120	6200	4450	4630	4120	4720
9	4450	4900	7310	8840	9800	6590	8020	6320	4300	4540	4210	4650
10	4570	4810	6860	9240	9650	6560	8050	6450	4630	4480	4240	4600
11	4660	4810	6900	8380	8990	6660	7270	6150	4690	4510	4270	4700
12	4750	4840	8020	7340	8630	6660	6560	5570	4690	4480	4300	4950
13	4720	4810	10700	7270	8450	6860	6180	5510	4690	4270	4300	4850
14	4540	4840	20400	7480	8300	7870	6320	5350	4690	4090	4270	4800
15	4480	5030	23800	8090	7690	7940	6280	5350	4630	4030	4420	4800
16	4450	5350	18900	8230	7340	8160	6250	5350	4660	4090	4480	4850
17	4420	5120	15800	8300	7130	7660	6760	5250	4630	4600	4450	4850
18	4390	5030	13700	8630	7130	7240	6520	5120	4600	4690	4210	4650
19	4240	5000	11600	9910	7240	7170	5410	5090	4570	4540	4360	4750
20	4220	4930	9800	9800	7270	6760	5280	5120	4450	4270	4450	4800
21	4210	4780	8660	9390	7200	6710	5060	5280	4450	4210	4510	4800
22	4180	5610	7760	9310	7910	6350	5000	5570	4450	4360	4570	4800
23	4150	5380	7550	8660	7410	5740	5000	5220	4390	4390	4450	4850
24	4180	5640	7340	8450	7130	5610	5030	5060	4390	4390	4540	4850
25	4210	6050	7000	8340	7340	5880	4970	5060	4300	4330	4630	4900
26	4240	9570	6900	7940	7240	5910	5910	4930	4450	4180	4660	5100
27	4240	9690	6620	7840	7200	5910	8410	4930	4600	4210	4660	4800
28	4240	8480	6280	6900	7030	5940	7910	4930	4600	4330	4510	4600
29	4240	7480	6280	6900	---	5980	8230	4930	4600	4450	4480	4500
30	4240	7380	6110	6900	---	6830	7800	4930	4840	4420	4420	4800
31	4360	---	6080	7030	---	7730	---	4660	---	4300	4450	---
TOTAL	135380	166990	294470	246110	221800	208630	207350	177830	136320	140300	135550	141360
MEAN	4367	5566	9499	7939	7921	6730	6912	5736	4544	4526	4373	4712
MAX	4750	9690	23800	9910	10300	8160	8410	7590	4840	5840	4660	5100
MIN	4150	4570	6080	6180	7030	5610	4970	4660	4300	4030	4120	4390
AC-FT	268500	331200	584100	488200	439900	413800	411300	352700	270400	278300	268900	280400

CAL YR 1977 TOTAL 1816730 MEAN 4977 MAX 23800 MIN 3560 AC-FT 3603000
WTR YR 1978 TOTAL 2212090 MEAN 6061 MAX 23800 MIN 4030 AC-FT 4388000

14103000 DESCHUTES RIVER AT MOODY, NEAR BIGGS, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1911-12, 1953-58, 1962 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1975 to current year.
WATER TEMPERATURES: December 1952 to February 1954, November 1954 to September 1958, June 1962 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 241 micromhos July 15, 1978; minimum, 63 micromhos Dec. 5, 1975.
WATER TEMPERATURES: Maximum, 22.0°C July 12, 13, 1964, Aug. 8, 1978; minimum, 0.5°C Dec. 30, 1955.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 241 micromhos July 15; minimum recorded, 90 micromhos Mar. 22-24.
WATER TEMPERATURES: Maximum, 22.0°C Aug. 8; minimum, 4.0°C Jan. 1-3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)
NOV										
09...	1630	4930	9.4	8.6	11.8	134	K16	K1120	29	8.8
DEC										
05...	1600	7590	7.6	7.4	12.2	106	52	250	25	6.7
JAN										
11...	1430	7450	6.6	7.9	12.0	125	130	1000	30	8.3
30...	1400	6900	6.3	8.1	12.6	128	K4	140	22	8.5
FEB										
21...	1500	7240	8.0	8.0	12.2	139	K2	25	32	9.4
MAR										
14...	1130	7980	8.2	8.4	12.5	137	K4	K53	29	10
APR										
11...	1500	7240	12.0	8.7	12.4	128	K2	<1	30	8.4
MAY										
08...	1600	6080	15.5	8.6	11.4	123	K5	K5	28	8.4
JUN										
14...	1200	4720	16.1	8.7	11.0	139	K18	K10	29	9.4
JUL										
06...	1530	4840	19.3	8.5	9.6	130	--	--	30	8.8
AUG										
15...	1300	4870	16.8	8.7	10.7	126	83	97	28	7.6

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
NOV										
09...	6.0	11	2.1	63	2.3	2.6	.1	.25	--	.01
DEC										
05...	4.6	9.2	1.7	45	3.4	2.2	.1	.14	--	.04
JAN										
11...	4.3	9.6	2.1	48	4.0	3.5	.1	.29	--	--
30...	5.4	10	1.9	60	2.8	1.7	.1	--	.05	.00
FEB										
21...	5.5	11	2.0	65	3.6	2.6	.1	.30	.27	.01
MAR										
14...	5.5	11	1.8	53	9.8	8.2	.1	--	.13	.01
APR										
11...	5.1	10	1.9	59	2.0	2.6	.1	.29	.24	.04
MAY										
08...	5.1	11	1.9	61	4.6	2.9	.1	.12	--	--
JUN										
14...	6.2	12	2.0	65	4.3	2.9	.1	.23	.26	.01
JUL										
06...	4.9	11	2.0	61	1.2	2.5	.1	.36	.37	.00
AUG										
15...	5.0	9.7	1.9	58	3.9	2.4	.1	.39	.79	.03

14103000 DESCHUTES RIVER AT MOODY, NEAR BIGGS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
NOV 09...	.13	--	.05	.09	--	--	1.1	47	0
DEC 05...	.20	--	.04	.09	--	--	2.3	36	0
JAN 11...	--	--	.07	.08	--	--	--	38	0
30...	.25	.30	.05	.08	--	--	2.0	44	0
FEB 21...	.26	.54	.07	.10	--	--	1.7	46	0
MAR 14...	.19	.33	.10	.14	--	--	1.9	48	0
APR 11...	.07	.35	.05	.08	1.4	.3	--	42	0
MAY 08...	--	--	.03	.09	--	--	1.6	42	0
JUN 14...	.05	.32	.06	.05	--	--	2.2	49	0
JUL 06...	.11	.48	.05	.10	1.6	1.6	--	42	0
AUG 15...	.05	.87	.04	.07	--	--	1.6	40	0

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER DAY)	TURBIDITY (JTU)	TURBIDITY (NTU)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
NOV 09...	91	100	1210	5	--	29	386	72	--
DEC 05...	78	80	1600	20	--	228	4670	40	--
JAN 11...	87	91	1750	7	--	76	1530	20	--
30...	64	89	1190	5	--	41	764	29	--
FEB 21...	92	105	1800	6	--	34	665	38	--
MAR 14...	91	107	1960	4	--	90	1940	18	--
APR 11...	86	96	1680	3	--	22	430	38	--
MAY 08...	96	99	1580	--	3.8	44	722	34	--
JUN 14...	102	105	1300	--	3.4	23	293	50	29
JUL 06...	95	97	1240	--	6.9	115	1500	76	--
AUG 15...	86	93	1130	--	3.1	37	487	54	--

DATE	IRON, DISSOLVED (UG/L AS FE)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)
NOV 09...	40	160	0	20	2	2	100	500	1
JAN 30...	70	430	0	20	1	2	100	0	0
APR 11...	40	350	0	20	2	1	200	200	1
JUL 06...	50	470	10	20	1	1	100	200	0

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
NOV 09...	3	4	4	0	0	9	14	4	11
JAN 30...	1	0	0	0	0	4	9	2	14
APR 11...	2	0	10	0	0	3	11	1	42
JUL 06...	3	0	0	0	2	4	10	7	18

14103000 DESCHUTES RIVER AT MOODY, NEAR BIGGS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SILVER, DIS-SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SELE-NIUM, TOTAL (UG/L AS SE)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)
NOV								
09...	0	0	10	20	0	0	.0	.0
JAN								
30...	1	0	20	30	0	0	.0	.0
APR								
11...	0	0	10	10	0	0	.0	.0
JUL								
06...	0	0	10	10	0	0	.0	.0

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO AUGUST 1978

DATE	DEC 5,77	MAR 14,78	MAY 8,78	JUN 14,78	AUG 15,78
TIME	1600	1130	1600	1200	1300
TOTAL CELLS/ML	850	700	3500	7200	2500
DIVERSITY: DIVISION	0.0	0.1	0.5	1.0	1.0
.CLASS	0.0	0.1	0.5	1.0	1.0
..ORDER	1.0	0.4	1.5	1.6	1.5
...FAMILY	2.1	2.7	2.6	2.2	3.3
....GENUS	2.2	3.2	3.2	2.6	3.5

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	8	1	--	-	--	-	--	-
...SCENEDESMACEAE										
....SCENEDESMUS	--	-	--	-	--	-	--	-	130	5
..TETRASPORALES										
...PALMELLACEAE										
....SPHAEROCYSTIS	--	-	--	-	--	-	--	-	130	5
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	8	1	470	13	1700#	23	47	2
....MELOSIRA	*	0	15	2	--	-	--	-	--	-
....STEPHANODISCUS	450#	53	23	3	840#	24	910	13	200	8
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	69	10	93	3	140	2	--	-
....COCCONEIS	85	10	38	5	62	2	91	1	110	4
....RHOICOSPHENIA	68	8	61	9	190	5	--	-	250	10
...CYMBELLACEAE										
....AMPHORA	--	-	--	-	62	2	--	-	16	1
....CYMBELLA	--	-	8	1	--	-	46	1	160	6
....EPITHEMIA	26	3	--	-	--	-	46	1	--	-
...DIATOMACEAE										
....DIATOMA	94	11	61	9	650#	19	590	8	310	13
...FRAGILARIACEAE										
....FRAGILARIA	--	-	--	-	--	-	--	-	300	12
....SYNEDRA	--	-	120#	18	--	-	--	-	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	68	8	99	14	93	3	140	2	160	6
...NAVICULACEAE										
....NAVICULA	34	4	160#	23	310	9	500	7	360	14
....NEIDIUM	--	-	--	-	31	1	--	-	--	-
...NITZSCHIACEAE										
....NITZSCHIA	26	3	23	3	310	9	360	5	16	1
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROCCOCCALES										
...CHROCCOCCAEAE										
....ANACYSTIS	--	-	--	-	120	4	--	-	310	13
..HORMOGONALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	--	-	--	-	250	7	2700#	38	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

14103000 DESCHUTES RIVER AT MOODY, NEAR BIGGS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LENGTH OF EXPO-SURE (DAYS)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)
APR					
11...	49	107	112	16.9	.000
MAY					
08...	27	57.6	61.6	25.1	.000
JUN					
14...	53	12.0	15.3	.890	.080
AUG					
15...	41	101	102	9.51	3.72

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	142		---	152	143	116	132	---	128	161	127
2	144	139		---	153	138	120	133	---	147	157	131
3	146	---		---	162	131	124	128	---	139	153	135
4	147	---		---	161	128	127	132	---	141	159	134
5	144	---		---	158	131	131	131	---	135	152	131
6	144	---		---	153	135	130	134	---	132	148	130
7	141	---		---	149	141	124	136	---	138	150	127
8	143	---		---	135	146	125	126	---	148	155	125
9	143	---		---	131	158	132	129	---	159	138	126
10	145	---		---	125	151	133	125	---	157	135	128
11	142	---		---	143	142	134	125	---	161	139	128
12	141	---		---	141	136	134	125	---	176	134	127
13	138	---		---	139	134	130	125	---	186	139	126
14	137	---		---	133	130	131	125	139	206	132	126
15	137	---		---	131	118	135	126	138	222	126	127
16	137	---		---	124	115	134	122	138	232	129	130
17	140	---		---	128	114	132	119	142	211	127	133
18	139	---		---	136	115	135	118	141	196	127	135
19	138	---		---	137	108	132	119	136	192	130	136
20	138	---		---	135	100	124	121	133	191	126	137
21	139	---		---	135	95	126	119	137	197	123	137
22	142	---		---	142	92	130	117	140	189	121	138
23	148	---		---	156	92	127	118	138	190	124	136
24	143	---		---	145	92	125	119	130	181	126	136
25	146	---		---	133	96	125	119	130	182	122	135
26	149	---		---	137	104	130	119	131	201	123	136
27	147	---		---	144	102	138	119	129	204	126	137
28	145	---		---	145	101	137	119	129	192	125	138
29	143	---		---	---	103	135	124	132	188	124	137
30	144	---		---	---	110	133	126	129	186	127	137
31	140	---		154	---	114	---	133	---	169	127	---

14103000 DESCHUTES RIVER AT MOODY, NEAR BIGGS, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.0	12.5	12.5	11.0	10.5	9.0	5.5	4.0	7.0	6.5	8.0	6.5
2	14.5	12.5	12.0	11.0	11.0	10.5	4.5	4.0	6.5	6.5	7.0	6.0
3	14.5	12.5	10.5	10.0	10.5	9.5	5.0	4.0	7.5	6.5	6.0	6.0
4	13.5	12.0	9.5	9.0	10.0	9.0	6.0	5.0	7.5	7.5	6.0	5.5
5	13.5	12.0	10.5	9.5	9.0	8.5	7.0	5.5	7.5	7.0	7.0	6.0
6	12.5	12.0	11.0	10.0	9.5	8.5	8.0	7.0	7.5	7.0	8.0	6.5
7	14.0	12.0	10.5	10.0	9.0	8.5	7.5	7.5	7.0	6.5	9.0	7.5
8	14.0	12.5	10.0	9.5	8.5	8.0	7.5	7.5	7.0	6.5	9.5	8.5
9	14.0	12.5	10.0	9.0	8.0	7.5	7.5	7.5	7.0	6.5	10.0	8.5
10	14.0	12.5	10.5	9.5	8.5	8.0	7.5	7.5	6.5	6.0	10.0	8.5
11	13.5	12.0	10.5	10.0	9.5	8.5	7.5	7.5	6.5	6.0	9.5	8.5
12	13.5	12.0	10.5	10.0	9.5	9.0	7.5	7.5	6.0	5.5	9.0	7.5
13	15.0	13.0	11.5	10.5	9.5	9.0	7.0	7.0	6.5	5.5	9.5	8.0
14	14.5	13.0	11.5	11.0	9.5	9.5	7.0	7.0	6.5	6.0	9.0	7.5
15	14.5	13.0	11.5	10.5	9.5	8.5	7.0	7.0	7.0	6.5	9.0	7.5
16	15.0	13.5	10.5	10.0	8.5	8.5	7.0	7.0	6.5	6.0	9.5	7.5
17	14.5	13.0	9.5	8.5	8.5	8.5	7.5	7.0	7.0	6.0	10.5	8.5
18	14.0	12.5	8.5	8.5	8.5	8.0	7.0	7.0	7.5	7.0	11.5	9.0
19	14.5	13.0	9.5	7.5	8.0	7.5	7.0	6.5	8.5	7.5	10.5	9.5
20	14.0	12.5	7.0	6.0	7.5	7.0	7.5	7.0	8.5	8.0	11.0	9.0
21	14.0	12.5	6.0	6.0	7.0	7.0	8.0	7.5	8.0	7.5	11.0	9.0
22	13.0	12.0	6.0	5.0	7.0	6.5	7.5	6.5	8.5	8.0	11.5	9.0
23	13.5	12.5	7.0	6.0	7.0	6.5	7.0	6.0	9.0	8.0	10.5	10.0
24	13.5	12.5	8.0	6.5	7.0	7.0	6.5	6.0	9.0	7.5	10.0	9.0
25	13.5	12.5	8.5	8.0	7.0	7.0	6.5	6.0	7.5	7.0	10.0	9.0
26	13.5	12.0	9.0	8.5	7.0	6.5	7.0	6.5	8.0	7.5	12.0	10.0
27	12.5	11.5	9.5	8.5	6.5	5.5	7.0	6.5	8.0	7.0	12.0	10.0
28	12.0	11.0	9.5	9.5	6.0	5.5	7.0	6.5	7.5	7.0	12.0	10.5
29	12.0	11.5	10.0	9.5	6.0	6.0	7.0	7.0	---	---	12.0	10.0
30	12.0	11.0	9.5	9.0	6.5	6.0	7.0	6.0	---	---	12.0	10.5
31	11.5	11.0	---	---	6.5	5.5	6.5	6.0	---	---	11.0	9.5
MONTH	15.0	11.0	12.5	5.0	11.0	5.5	8.0	4.0	9.0	5.5	12.0	5.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.5	9.0	13.5	10.5	18.5	14.5	19.5	16.5	20.5	17.0	18.5	15.0
2	10.0	9.0	14.0	11.5	19.0	15.5	18.0	14.5	21.0	17.5	19.5	16.0
3	10.5	9.0	13.0	11.0	20.0	16.0	16.5	15.0	21.5	18.0	19.5	17.5
4	10.0	9.0	12.5	10.0	20.0	17.0	16.0	14.0	21.5	18.5	17.5	16.0
5	11.0	9.0	12.5	9.5	20.0	17.5	18.5	14.5	21.5	18.5	16.5	15.0
6	10.0	9.0	14.0	10.0	19.5	17.5	20.0	16.0	21.5	18.0	17.5	15.0
7	10.5	8.5	15.0	11.5	19.5	16.5	21.0	17.0	21.5	18.0	15.5	14.5
8	10.0	9.0	16.0	12.0	19.5	16.5	20.0	16.5	22.0	18.5	15.0	13.5
9	11.5	9.0	15.0	13.5	18.5	16.5	19.5	16.5	21.5	19.0	15.0	14.0
10	12.5	10.0	13.5	12.0	17.5	15.5	18.5	15.5	20.5	18.0	16.0	14.0
11	12.0	9.5	14.5	12.0	18.0	14.5	19.0	15.5	20.5	17.5	16.5	14.0
12	12.0	9.0	13.5	11.5	18.0	15.5	20.0	16.0	19.0	17.0	16.5	14.0
13	11.5	9.5	13.5	12.0	17.5	15.0	21.0	17.0	18.5	16.0	15.5	14.5
14	11.0	9.0	13.0	12.5	17.0	15.0	21.5	18.0	18.5	15.5	16.5	14.0
15	11.5	9.5	14.5	11.5	16.5	13.5	21.5	19.0	18.0	16.5	16.5	14.5
16	11.0	9.5	14.5	12.0	17.5	13.5	19.5	17.0	17.5	15.0	16.0	13.5
17	10.5	9.0	16.0	12.5	19.0	14.5	19.5	16.0	18.0	14.5	14.5	13.0
18	12.5	9.5	17.0	13.5	19.0	16.0	20.0	16.0	18.5	15.0	15.0	12.5
19	13.0	10.5	17.5	14.0	19.5	15.5	20.5	17.0	18.0	16.5	15.5	12.5
20	11.5	10.0	17.5	15.0	19.5	16.0	20.5	17.0	17.0	16.0	15.5	13.5
21	11.5	9.5	17.0	14.5	19.5	16.5	21.0	17.5	18.0	15.5	16.0	14.0
22	11.0	9.0	16.0	13.5	19.0	16.0	21.5	17.5	17.5	15.5	16.0	13.5
23	11.5	9.0	15.0	12.0	19.0	16.0	21.5	18.5	17.0	15.0	16.5	14.0
24	12.5	10.0	15.0	12.5	17.5	15.5	21.5	18.0	16.5	15.5	17.0	14.5
25	12.5	11.5	15.0	12.5	17.5	14.0	21.5	17.5	17.5	15.0	17.0	15.0
26	12.0	11.0	14.0	12.5	18.5	14.5	20.5	19.0	18.5	15.0	17.5	15.0
27	11.5	10.5	15.5	13.0	19.5	15.5	20.5	17.5	19.0	15.5	16.5	15.5
28	13.5	11.0	16.0	13.5	19.5	16.5	20.5	17.0	19.5	16.0	17.0	15.0
29	13.0	10.5	16.5	13.5	19.0	16.5	21.0	17.5	20.0	17.0	16.5	14.0
30	13.0	11.0	17.0	13.0	19.0	16.0	21.0	17.5	18.5	17.5	15.5	14.5
31	---	---	17.5	14.0	---	---	21.0	17.5	18.0	16.5	---	---
MONTH	13.5	8.5	17.5	9.5	20.0	13.5	21.5	14.0	22.0	14.5	19.5	12.5

14105700 COLUMBIA RIVER AT THE DALLES, OR

LOCATION.--Lat 45°36'27", long 121°10'20", in SW¼SW¼ sec.34, T.2 N., R.13 E., Wasco County, Hydrologic Unit 17070105, Corps of Engineers land, on left bank 0.3 mi (0.5 km) downstream from Mill Creek, 2.6 mi (4.2 km) downstream from The Dalles Dam, and at mile 188.9 (303.9 km).

DRAINAGE AREA.--237,000 mi^2 (614,000 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1857 to September 1877 (annual maximum only, at Lower Cascades Landing, published in WSP 1318), June 1878 to current year. Published as "near The Dalles" 1936-56.

REVISED RECORDS.--WSP 534: 1920(m). WSP 1094: 1894. WSP 1248: 1866, 1888, 1899, 1909. WSP 1518: 1876(M).

GAGE.--Acoustic velocity meter (AVM) with water-stage and velocity-index recorder. Datum of gage is National Geodetic Vertical Datum of 1929. See WSP 1738 for history of changes prior to Mar. 16, 1957. Mar. 16, 1957, to Sept. 30, 1968, water-stage recorder at site 0.4 mi (0.6 km) upstream at same datum.

REMARKS.--Water-discharge records excellent. Considerable regulation by many large reservoirs. Diurnal fluctuations caused by powerplant and gates at The Dalles Dam. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--100 years, 193,900 ft^3/s (5,491 m^3/s), 140,500,000 acre-ft/yr (173 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (1858-1978), 1,240,000 ft^3/s (35,100 m^3/s) June 6, 1894, gage height, 106.5 ft (32.46 m); minimum (1878-1978), 12,100 ft^3/s (343 m^3/s) Apr. 16, 1968 (recorded by AVM due to closure of John Day dam).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 313,000 ft^3/s (8,860 m^3/s) June 10; minimum daily, 58,800 ft^3/s (1,670 m^3/s) Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91900	106000	152000	131000	172000	189000	217000	252000	263000	192000	172000	126000
2	79200	111000	154000	114000	173000	194000	263000	244000	231000	184000	161000	93400
3	123000	103000	161000	158000	173000	210000	275000	266000	165000	180000	162000	87700
4	115000	123000	142000	167000	135000	128000	255000	261000	211000	174000	140000	76100
5	108000	109000	164000	157000	153000	134000	242000	290000	223000	222000	89900	116000
6	131000	74500	147000	154000	147000	171000	237000	266000	227000	206000	78700	164000
7	120000	99800	151000	156000	171000	158000	234000	238000	229000	208000	129000	204000
8	76500	123000	173000	127000	172000	158000	211000	277000	273000	170000	140000	189000
9	76600	126000	164000	135000	186000	161000	221000	256000	277000	195000	132000	162000
10	102000	121000	120000	162000	171000	166000	260000	248000	313000	227000	134000	108000
11	91300	89900	88300	193000	183000	162000	243000	244000	275000	222000	132000	150000
12	97000	79200	172000	193000	150000	123000	233000	274000	299000	241000	91500	134000
13	101000	76200	162000	182000	163000	159000	257000	237000	253000	223000	58800	153000
14	91500	91700	180000	160000	174000	182000	262000	217000	264000	219000	124000	192000
15	74700	91600	217000	137000	184000	183000	251000	275000	259000	174000	134000	160000
16	64600	131000	199000	188000	188000	151000	195000	265000	258000	141000	137000	135000
17	97900	139000	221000	163000	200000	169000	227000	282000	240000	192000	127000	97600
18	111000	163000	199000	195000	143000	156000	213000	293000	207000	195000	130000	152000
19	93500	112000	176000	194000	127000	125000	212000	284000	232000	167000	108000	183000
20	102000	124000	186000	159000	155000	173000	253000	206000	238000	164000	76700	163000
21	105000	179000	149000	153000	187000	162000	228000	223000	225000	174000	131000	148000
22	68700	171000	154000	142000	170000	170000	172000	250000	215000	162000	122000	150000
23	61100	144000	148000	194000	163000	196000	183000	291000	210000	140000	114000	111000
24	85100	117000	125000	188000	180000	215000	227000	298000	181000	185000	129000	99900
25	81100	124000	96200	169000	168000	202000	214000	286000	202000	168000	122000	144000
26	93600	98800	105000	166000	146000	176000	222000	304000	238000	160000	95400	135000
27	120000	104000	129000	204000	174000	208000	227000	266000	204000	163000	90400	125000
28	113000	116000	163000	185000	186000	208000	243000	214000	240000	139000	128000	130000
29	94500	127000	161000	147000	---	229000	232000	224000	227000	98200	141000	116000
30	70000	133000	141000	183000	---	227000	269000	261000	228000	90300	134000	123000
31	106000	---	144000	187000	---	255000	---	239000	---	152000	174000	---
TOTAL	2945800	3507700	4843500	5143000	4694000	5500000	6978000	8031000	7107000	5527500	3838400	4127700
MEAN	95030	116900	156200	165900	167600	177400	232600	259100	236900	178300	123800	137600
MAX	131000	179000	221000	204000	200000	255000	275000	304000	313000	241000	174000	204000
MIN	61100	74500	88300	114000	127000	123000	172000	206000	165000	90300	58800	76100
AC-FT	5843000	6958000	9607000	10200000	9311000	10910000	13840000	15930000	14100000	10960000	7613000	8187000

CAL YR 1977 TOTAL 42764000 MEAN 117200 MAX 221000 MIN 53900 AC-FT 84820000
WTR YR 1978 TOTAL 62243600 MEAN 170500 MAX 313000 MIN 58800 AC-FT 123500000

14105700 COLUMBIA RIVER AT THE DALLES, OR--Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected at The Dalles Dam, 3.2 mi (5.1 km) upstream from discharge station.

PERIOD OF RECORD.--Water years 1951 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1950 to current year.
WATER TEMPERATURES: December 1950 to September 1969, October 1973 to September 1976.

REMARKS.--No appreciable inflow between sampling point and gaging station except during periods of heavy local runoff.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 324 micromhos/cm Dec. 7, 1955; minimum daily, 95 micromhos/cm June 8, 1972.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 212 micromhos Feb. 11; minimum daily recorded, 98 micromhos June 23, 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CHLORO-PHYLL A PHYTO-PLANK-TON, UNCORR. (UG/L)	CHLORO-PHYLL B PHYTO-PLANK-TON, UNCORR. (UG/L)
OCT										
04...	1400	115000	17.1	8.1	9.3	155	--	--	2.00	.000
NOV										
09...	1230	126000	12.2	7.9	10.3	190	K5	100	7.14	.206
DEC										
05...	1300	164000	8.0	7.4	11.8	194	43	K30	2.39	.664
JAN										
11...	1200	193000	3.2	7.7	12.7	178	55	81	.808	.723
30...	1200	183000	4.3	7.8	12.2	213	86	80	1.48	.000
FEB										
21...	1200	187000	4.1	8.0	12.7	197	K1	K18	--	--
MAR										
14...	0815	182000	5.0	7.6	12.4	185	80	K7	4.83	.000
APR										
12...	0900	233000	8.9	8.0	12.0	175	K3	<1	3.47	2.67
MAY										
08...	1200	277000	11.5	8.0	9.9	157	K2	K3	13.7	.000
JUN										
13...	1500	253000	16.3	8.3	12.1	118	K11	K10	8.98	.000
JUL										
05...	1400	222000	17.1	8.2	9.3	116	--	--	--	--
AUG										
16...	0900	140000	21.1	8.4	8.1	134	K5	K8	3.15	.762
SEP										
28...	0830	134000	17.3	7.8	9.3	150	K15	K22	--	--

DATE	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
OCT										
04...	6	6.3	.07	.02	.09	.11	.18	.02	--	86
NOV										
09...	15	7.2	.17	.01	.18	.19	.36	.06	1.5	98
DEC										
05...	9	9.4	.31	.04	.13	.17	.48	.06	1.6	116
JAN										
11...	25	12	1.4	.07	.29	.36	1.8	.09	--	108
30...	11	13	.37	.02	.03	.05	.42	.06	2.2	123
FEB										
21...	21	15	.43	.00	.22	.22	.65	.07	2.2	113
MAR										
14...	9	12	.36	.01	.10	.11	.47	.11	2.3	103
APR										
12...	14	14	.33	.04	.27	.31	.64	.06	2.0	109
MAY										
08...	13	11	.10	.00	.93	.93	1.0	.07	2.5	94
JUN										
13...	10	9.0	.04	.00	.47	.47	.51	.03	3.5	69
JUL										
05...	10	7.9	.01	.00	.51	.51	.52	.07	3.2	66
AUG										
16...	4	7.0	.03	.05	.30	.35	.38	.02	2.1	75
SEP										
28...	18	7.9	.10	.04	.25	.29	.39	.04	1.7	93

14105700 COLUMBIA RIVER AT THE DALLES, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SELE-NIUM, TOTAL (UG/L AS SE)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)
OCT										
04...	0	2	<10	5	10	160	100	--	0	.0
NOV										
09...	2	2	22	0	13	200	39	70	0	.0
DEC										
05...	14	1	3	0	12	520	20	60	0	.0
JAN										
11...	37	2	1	20	22	1400	9	40	0	.0
30...	15	2	--	0	24	490	9	40	0	.0
FEB										
21...	24	2	2	10	11	520	14	40	0	.0
MAR										
14...	8	1	2	0	21	460	4	60	0	.0
APR										
12...	23	5	3	0	28	620	18	50	0	.0
MAY										
08...	20	1	--	5	43	550	--	60	0	.0
JUN										
13...	11	2	2	0	22	530	6	40	0	.0
JUL										
05...	70	0	3	10	19	1900	17	20	0	.0
AUG										
16...	2	2	5	0	26	670	38	10	0	.0
SEP										
28...	10	1	3	0	13	150	40	20	0	.0

DATE	TIME	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA)	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	OIL AND GREASE (MG/L)
OCT									
04...	1400	16	4.8	5.5	1.1	63	11	2.9	0
NOV									
09...	1230	17	6.0	8.1	1.5	70	15	4.5	--
JAN									
30...	1200	20	7.0	11	2.1	77	19	5.6	0
APR									
12...	0900	19	5.9	7.9	1.7	66	13	4.0	0
JUL									
05...	1400	21	3.9	4.8	1.4	37	6.2	2.3	0

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---		---	160	211	---	184	161	136	109	126	138
2	---		---	158	206	---	182	160	133	112	126	139
3	---		---	167	204	---	181	160	130	111	129	141
4	---		---	162	201	---	180	160	131	113	127	139
5	---		---	163	199	---	183	159	129	116	128	147
6	---		---	165	192	---	183	161	127	117	129	142
7	---		---	172	188	---	180	162	126	116	129	143
8	---		---	182	189	179	178	161	125	114	130	144
9	---		---	182	187	185	176	161	124	114	130	146
10	---		---	182	188	186	175	160	121	114	131	147
11	164		---	183	212	191	174	161	121	115	132	150
12	165		---	180	188	189	173	157	122	114	134	150
13	168		---	178	185	189	170	153	121	116	133	148
14	166		---	173	184	189	167	152	120	118	134	149
15	169		---	171	183	188	165	150	117	116	134	150
16	174		---	170	185	186	163	149	---	116	134	151
17	173		---	173	188	186	161	148	111	116	132	151
18	172		---	174	193	190	162	149	108	116	134	150
19	179		---	176	194	195	159	150	105	116	138	150
20	181		---	175	193	191	160	152	101	117	136	149
21	183		---	176	196	195	159	156	102	118	136	146
22	186		---	175	196	193	158	158	102	118	136	146
23	185		---	176	198	193	158	161	98	121	136	147
24	186		183	178	197	193	159	161	98	126	136	145
25	182		182	187	---	186	161	159	100	121	138	149
26	---		180	189	---	182	163	156	99	121	137	150
27	---		188	194	---	183	163	150	102	121	136	150
28	---		180	201	---	185	162	147	106	121	136	150
29	---		172	204	---	184	162	144	105	122	137	153
30	---		171	210	---	184	162	141	107	123	138	151
31	---		162	211	---	185	---	136	---	124	138	---
MEAN	176		177	179	194	188	169	155	115	117	133	147

14113200 MOSIER CREEK NEAR MOSIER, OR

LOCATION.--Lat 45°38'55", long 121°22'35", in NW¼NW¼ sec.19, T.2 N., R.12 E., Wasco County, Hydrologic Unit 17070105, on left bank 0.1 mi (0.2 km) downstream from West Fork Mosier Creek, 2.5 mi (4.0 km) southeast of Mosier, and at mile 3.0 (4.8 km).

DRAINAGE AREA.--41.5 mi² (107.5 km²).

PERIOD OF RECORD.--April 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 425 ft (130 m), from topographic map. Prior to July 22, 1976, water-stage recorder at site 20 ft (6.1 m) upstream at datum 3.57 ft (1.088 m) higher. July 22, 1976, to Dec. 12, 1977, water-stage recorder at site 20 ft (6.1 m) upstream at datum 1.57 ft (0.479 m) higher.

REMARKS.--Records good except those for period of no gage-height record, which are fair. No regulation. Several small pumping diversions for irrigation above station.

AVERAGE DISCHARGE.--15 years, 29.2 ft³/s (0.827 m³/s), 21,160 acre-ft/yr (26.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,790 ft³/s (136 m³/s) Dec. 23, 1964, gage height, 8.9 ft (2.71 m), from flood profile, from rating curve extended above 1,000 ft³/s (28.3 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.35 ft³/s (0.010 m³/s) July 25, 26, Aug. 6, 7, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,720 ft³/s (77.0 m³/s) Dec. 13, gage height, 9.40 ft (2.865 m), from rating curve extended above 200 ft³/s (5.66 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.35 ft³/s (0.010 m³/s) July 25, 26, Aug. 6. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	4.0	18	24	51	115	34	10	3.6	1.4	.41	1.8
2	2.5	6.0	60	24	55	98	31	9.6	3.6	1.4	.41	1.6
3	2.4	4.5	65	23	84	85	28	9.2	3.5	1.6	.41	2.4
4	2.3	4.0	50	23	133	76	26	8.9	3.1	1.6	.38	2.3
5	2.2	3.6	30	22	168	69	24	9.2	2.9	1.6	.38	2.4
6	2.2	3.2	28	23	204	62	22	8.9	2.7	1.4	.41	2.4
7	2.2	3.0	26	25	226	56	21	8.5	2.6	1.3	.38	2.1
8	2.3	2.8	22	30	255	61	19	7.5	2.4	1.1	.40	2.1
9	2.3	2.7	20	35	255	65	17	7.2	2.4	.91	.44	2.6
10	2.2	2.5	20	40	195	70	16	7.2	2.4	.91	.50	2.7
11	2.2	2.4	200	47	155	72	16	7.2	2.6	.91	.69	2.4
12	2.1	2.4	150	57	131	71	15	7.2	2.7	.99	.76	2.3
13	2.1	3.0	1600	64	110	67	13	7.2	2.6	.91	.91	2.3
14	2.1	5.0	1000	71	90	61	13	7.2	2.6	.76	1.1	2.3
15	2.3	8.0	600	115	77	55	13	7.2	2.7	.76	1.7	1.9
16	2.2	5.5	300	[illegible]	68	51	14	6.9	2.9	1.2	1.7	1.8
17	2.2	4.0	300	[illegible]3	61	50	13	6.3	2.6	1.1	1.3	1.9
18	2.2	3.2	150	2[illegible]	54	55	13	5.8	2.4	.83	1.4	1.9
19	2.3	2.9	100	25[illegible]	52	62	12	5.5	2.1	.76	1.6	1.9
20	2.4	2.8	80	193	57	67	12	5.3	2.1	.63	2.4	1.9
21	2.5	2.7	60	175	64	68	11	5.0	1.9	.63	2.7	1.9
22	2.6	2.6	50	168	72	68	11	5.0	1.9	.58	2.1	2.1
23	2.7	2.6	45	142	84	74	11	5.0	1.9	.53	1.8	2.3
24	2.8	3.0	40	118	142	70	10	5.0	1.9	.53	2.9	1.9
25	3.0	10	40	100	152	65	10	4.5	1.9	.45	2.9	1.9
26	3.0	45	35	89	149	60	12	4.5	1.9	.69	2.3	1.9
27	2.8	25	35	77	142	55	12	4.5	1.8	1.2	1.8	1.8
28	3.0	20	30	69	130	52	11	4.5	1.6	.91	1.7	2.1
29	3.2	29	28	63	---	46	11	4.5	1.4	.76	1.4	2.1
30	3.2	24	28	57	---	42	11	4.3	1.6	.58	1.6	2.1
31	3.5	---	25	54	---	38	---	4.1	---	.49	1.8	---
TOTAL	77.5	239.4	5235	2743	3416	2006	482	202.9	72.3	29.42	40.68	63.1
MEAN	2.50	7.98	169	88.5	122	64.7	16.1	6.55	2.41	.95	1.31	2.10
MAX	3.5	45	1600	257	255	115	34	10	3.6	1.6	2.9	2.7
MIN	2.1	2.4	18	22	51	38	10	4.1	1.4	.45	.38	1.6
AC-FT	154	475	10380	5440	6780	3980	956	402	143	58	81	125

CAL YR 1977 TOTAL 6351.21 MEAN 17.4 MAX 1600 MIN .72 AC-FT 12600
WTR YR 1978 TOTAL 14607.30 MEAN 40.0 MAX 1600 MIN .38 AC-FT 28970

NOTE.--No gage-height record Oct. 15 to Jan. 11.

14118500 WEST FORK HOOD RIVER NEAR DEE, OR

LOCATION.--Lat 45°35'55", long 121°38'05", in SE¼ sec.1, T.1 N., R.9 E., Hood River County, Hydrologic Unit 17070105, on left bank 0.3 mi (0.5 km) upstream from Dead Point Creek, 0.8 mi (1.3 km) northwest of Dee, and at mile 0.4 (0.6 km).

DRAINAGE AREA.--95.6 mi^2 (247.6 km^2).

PERIOD OF RECORD.--September 1913 to February 1916 (incomplete), June 1932 to current year.

GAGE.--Water-stage recorder. Datum of gage is 802.1 ft (244.48 m) National Geodetic Vertical Datum of 1929. Sept. 1, 1913, to Feb. 12, 1916, nonrecording gage at site 0.5 mi (0.8 km) upstream at different datum.

REMARKS.--Records good. No regulation. Dee Irrigation District canal diverts from right bank about 6 mi (10 km) above station for irrigation above station and in Middle Fork basin. Diversions from Green Point Creek basin above station for irrigation near Oak Grove; water from two of these diversions is carried in Hood River Irrigation District canal.

AVERAGE DISCHARGE.--47 years (water years 1914, 1933-78), 562 ft^3/s (15.92 m^3/s), 407,200 acre-ft/yr (502 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, Dec. 22, 1964, gage height, 27.0 ft (8.23 m), from floodmarks; maximum daily, 15,000 ft^3/s (425 m^3/s) Dec. 23, 1964; minimum, 93 ft^3/s (2.63 m^3/s) Aug. 22, 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,100 ft^3/s (116 m^3/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
Nov. 25	1830	8,080	229	11.24	3.426	Dec. 13	unknown	*14,300	405	*14.89	4.538

Minimum, 132 ft^3/s (3.74 m^3/s) July 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	303	1190	1380	417	522	534	676	522	357	238	154	169
2	268	1740	2150	417	690	494	625	494	354	226	151	177
3	236	930	4250	440	1010	467	589	467	342	222	152	183
4	217	647	3000	480	1010	445	550	438	336	215	162	171
5	202	522	1920	520	958	424	555	420	336	215	160	171
6	206	452	2640	630	1120	410	514	399	336	224	151	177
7	354	534	2050	620	1070	438	467	383	312	222	152	162
8	309	438	1520	680	1110	580	441	380	315	213	158	162
9	266	396	1300	660	982	572	424	389	324	204	158	195
10	243	373	1450	600	836	572	434	393	363	202	151	210
11	224	345	2860	510	739	559	463	530	389	197	151	258
12	208	333	2360	676	657	538	424	506	330	193	165	226
13	200	494	11500	671	593	526	410	611	324	189	183	217
14	189	1280	7000	620	542	490	399	958	327	193	152	245
15	183	2080	4000	620	510	456	406	918	389	200	213	217
16	177	1320	2600	630	471	445	406	763	339	236	233	187
17	169	901	1900	657	449	475	399	652	312	213	193	213
18	165	700	1300	695	445	580	413	576	295	191	165	243
19	160	572	1090	666	486	662	424	542	292	183	162	206
20	156	479	870	647	502	744	445	526	276	173	193	193
21	152	438	770	779	490	779	449	494	271	179	219	189
22	149	431	719	896	498	820	502	460	263	183	187	185
23	171	424	700	753	506	1060	526	427	258	181	189	191
24	181	602	671	666	634	1170	494	410	250	185	268	185
25	290	4520	625	625	638	1040	518	403	255	173	271	181
26	276	3880	567	647	652	988	652	424	245	197	208	179
27	233	2160	530	593	625	947	779	434	241	206	185	187
28	217	1890	502	559	576	901	749	479	263	171	175	213
29	261	2570	486	530	---	863	652	413	253	162	169	189
30	598	1530	467	494	---	841	580	380	248	158	169	179
31	744	---	441	486	---	763	---	360	---	160	171	---
TOTAL	7707	34171	63618	18884	19321	20583	15365	15551	9195	6104	5570	5860
MEAN	249	1139	2052	609	690	664	512	502	307	197	180	195
MAX	744	4520	11500	896	1120	1170	779	958	389	238	271	258
MIN	149	333	441	417	445	410	399	360	241	158	151	162
AC-FT	15290	67780	126200	37460	38320	40830	30480	30850	18240	12110	11050	11620

CAL YR 1977 TOTAL 186401 MEAN 511 MAX 11500 MIN 115 AC-FT 369700
WTR YR 1978 TOTAL 221929 MEAN 608 MAX 11500 MIN 149 AC-FT 440200

NOTE.--No gage-height record Dec. 2-21.

14120000 HOOD RIVER AT TUCKER BRIDGE, NEAR HOOD RIVER, OR

LOCATION.--Lat 45°39'20", long 121°32'50", in SE¼ sec.15, T.2 N., R.10 E., Hood River County, Hydrologic Unit 17070105, on right bank 25 ft (8 m) downstream from Tucker Bridge, 0.5 mi (0.8 km) upstream from Odell Creek, 4.5 mi (7.2 km) southwest of town of Hood River, and at mile 6.1 (9.8 km).

DRAINAGE AREA.--279 mi^2 (723 km^2).

PERIOD OF RECORD.--October 1897 to December 1899, September 1913 to September 1914, August 1915 to September 1917, January 1965 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1318: 1899. WSP 1935: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 383.2 ft (116.80 m) National Geodetic Vertical Datum of 1929 (Oregon State Highway Department bench mark). Prior to July 23, 1915, nonrecording gage at bridge at various datums. July 23 to Dec. 21, 1915, water-stage recorder at site 0.8 mi (1.3 km) upstream at different datum. January 1916 to September 1917, nonrecording gage at bridge at different datum. Jan. 16 to July 23, 1965, nonrecording gage at bridge.

REMARKS.--Records good. Some daily fluctuation caused by diversion dam above station and sawmill at Dee. Diversions above station for irrigation.

AVERAGE DISCHARGE.--18 years (water years 1898-99, 1914, 1916-17, 1966-78), 1,125 ft^3/s (31.86 m^3/s), 815,100 acre-ft/yr (1.01 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,300 ft^3/s (632 m^3/s), Dec. 13, 1977, gage height, 15.59 ft (4.752 m); minimum recorded, 136 ft^3/s (3.85 m^3/s) Sept. 16, 1915, caused by temporary storage behind dam at Dee.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 20.6 ft (6.28 m), present datum, discharge, 33,200 ft^3/s (940 m^3/s), from rating curve extended above 1,500 ft^3/s (42.5 m^3/s) on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft^3/s (127 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2000	13,700	388	11.95	3.642
Nov. 29	0700	5,570	158	8.35	2.545
Dec. 2	1630	17,100	484	13.34	4.066
Dec. 6	2100	6,620	187	8.87	2.704
Dec. 13	unknown	*22,300	632	*15.59	4.752

Minimum, 171 ft^3/s (4.84 m^3/s) Aug. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	459	1680	2410	1130	1120	1080	1190	912	664	437	305	347
2	419	2250	10700	1130	1350	1020	1130	886	673	411	300	366
3	385	1270	7060	1130	1740	989	1080	857	673	399	312	402
4	358	968	4510	1280	1730	958	1040	823	677	377	345	374
5	340	823	3020	1300	1740	922	1040	777	706	391	350	358
6	355	728	4950	1390	1980	891	984	750	719	405	317	371
7	544	833	4230	1280	1910	917	927	728	648	402	327	322
8	478	702	2800	1380	1940	1090	882	728	624	396	353	314
9	419	644	2190	1340	1780	1070	852	759	664	385	363	456
10	385	620	2350	1300	1570	1040	872	763	693	382	317	459
11	363	593	6570	1260	1440	1030	917	917	711	355	298	459
12	353	574	5490	1550	1320	945	847	857	612	340	319	408
13	347	768	18000	1370	1230	979	828	1040	581	340	319	382
14	332	1750	12500	1330	1160	927	814	1460	555	371	277	414
15	327	2870	7400	1330	1100	882	814	1350	624	417	337	399
16	319	1830	5300	1330	1040	862	833	1150	544	509	396	377
17	310	1340	4000	1400	1010	896	800	1020	509	446	322	396
18	307	1100	3050	1460	984	1020	814	942	502	394	275	422
19	300	927	2500	1440	1030	1110	823	922	516	358	264	385
20	293	791	2150	1380	1040	1200	838	932	472	340	319	371
21	286	719	1920	1570	1020	1240	838	917	475	340	399	366
22	279	706	1800	1660	1020	1310	906	882	468	353	329	363
23	317	711	1690	1470	1040	1660	896	809	453	363	322	388
24	329	973	1620	1350	1230	1680	872	763	437	396	505	405
25	505	7290	1530	1290	1230	1560	912	746	428	358	519	419
26	456	6940	1420	1300	1260	1530	1110	763	408	446	399	443
27	394	3510	1350	1220	1200	1480	1230	782	399	526	363	468
28	371	3000	1290	1170	1130	1440	1180	862	434	388	350	453
29	428	4290	1240	1130	---	1400	1050	768	443	334	350	425
30	867	2680	1200	1080	---	1390	979	711	446	324	347	414
31	1010	---	1150	1070	---	1300	---	668	---	329	350	---
TOTAL	12635	53880	127390	40820	37344	35868	28298	27244	16758	12012	10648	11926
MEAN	408	1796	4109	1317	1334	1157	943	879	559	387	343	398
MAX	1010	7290	18000	1660	1980	1680	1230	1460	719	526	519	468
MIN	279	574	1150	1070	984	862	800	668	399	324	264	314
CFSM	1.46	6.44	14.7	4.72	4.78	4.15	3.38	3.15	2.00	1.39	1.23	1.43
IN.	1.68	7.18	16.99	5.44	4.98	4.78	3.77	3.63	2.23	1.60	1.42	1.59
AC-FT	25060	106900	252700	80970	74070	71140	56130	54040	33240	23830	21120	23660

CAL YR 1977 TOTAL 326838 MEAN 895 MAX 18000 MIN 201 CFSM 3.21 IN 43.58 AC-FT 648300
WTR YR 1978 TOTAL 414823 MEAN 1137 MAX 18000 MIN 264 CFSM 4.08 IN 55.31 AC-FT 822800

NOTE.--No gage-height record Dec. 12-22.

14128600 COLUMBIA RIVER AT STEVENSON, WA

LOCATION.--Lat 45°41'58", long 121°52'02". in NW¼SE¼ sec.36, T.3 N., R.7½ E., Skamania County, Hydrologic Unit 17070105, on right bank 0.9 mi (1.4 km) east of Stevenson, and at mile 151.3 (243.4 km).

DRAINAGE AREA.--239,800 mi² (621,100 km²), approximately.

PERIOD OF RECORD.--October 1973 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 79.79 ft (24.320 m) June 20, 1974; minimum, 70.01 ft (21.339 m) Sept. 13, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 78.35 ft (23.881 m) Dec. 15; minimum, 72.15 ft (21.991 m) Aug. 14.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	76.01	73.67	74.86	76.51	73.07	74.78	77.19	75.21	76.16	76.64	73.92	75.13
2	75.72	73.43	74.41	76.23	72.29	74.86	77.66	74.74	76.37	76.54	74.34	75.07
3	75.90	72.79	74.27	76.14	72.72	73.98	77.69	74.63	75.92	76.82	73.42	75.15
4	76.33	72.59	74.05	75.94	72.36	74.14	77.43	73.72	75.26	76.76	73.14	75.33
5	76.53	73.89	75.17	76.49	74.03	75.42	77.23	74.03	75.74	76.24	73.32	74.99
6	76.79	73.43	75.16	76.29	73.59	74.49	76.76	72.92	75.05	77.04	73.20	75.06
7	76.75	73.79	75.23	75.78	75.54	74.04	77.74	73.93	75.77	76.96	75.26	76.07
8	76.33	73.76	74.62	76.36	72.96	74.81	77.56	75.09	76.55	76.08	73.52	74.79
9	75.37	72.31	73.70	76.31	72.85	74.36	77.57	74.38	76.06	76.28	72.84	74.47
10	76.29	72.70	74.28	76.49	72.99	74.86	77.14	73.83	75.10	75.62	73.74	74.79
11	76.46	73.64	75.14	76.38	73.46	74.93	76.94	73.70	75.10	76.90	73.80	75.38
12	76.47	73.77	75.17	75.80	73.72	74.60	78.06	75.57	77.02	77.40	75.18	76.34
13	76.11	73.41	74.76	75.51	73.55	74.58	77.71	74.55	76.54	77.20	74.34	75.90
14	76.32	73.84	75.11	75.69	73.17	74.27	77.44	75.24	76.30	77.06	74.54	75.90
15	76.28	74.30	75.28	76.02	73.46	74.51	78.35	74.25	76.12	76.12	73.44	74.66
16	75.98	74.19	75.07	77.16	73.26	75.05	77.49	75.53	76.40	77.34	73.80	75.91
17	76.27	73.13	74.89	77.61	74.39	76.16	77.14	75.64	76.27	76.86	73.50	75.36
18	76.57	72.69	74.73	77.73	73.39	76.01	77.12	74.84	76.13	77.18	74.76	76.01
19	75.85	73.06	74.46	77.18	74.44	75.49	77.04	75.02	75.96	76.74	74.40	75.58
20	75.49	72.41	73.88	75.90	73.58	74.65	77.16	73.68	75.43	77.04	74.24	75.73
21	76.61	72.91	74.65	76.49	73.25	75.01	76.64	73.40	75.27	77.10	74.60	75.79
22	76.54	73.97	75.23	76.35	73.05	74.81	76.84	73.22	75.06	76.82	74.50	75.64
23	75.72	73.56	74.58	76.38	73.14	74.89	76.70	73.76	75.41	77.36	74.40	76.01
24	75.35	72.67	73.97	76.22	72.86	74.17	76.92	73.94	75.29	76.66	74.06	75.39
25	76.07	73.56	74.80	76.50	73.58	74.92	76.54	74.50	75.16	77.06	73.48	75.38
26	76.08	74.24	74.96	76.27	72.71	74.40	76.14	74.48	75.22	76.66	73.60	74.91
27	76.64	73.38	75.26	75.39	72.41	73.91	76.40	72.92	74.76	76.76	74.08	75.47
28	76.16	73.18	74.98	76.48	72.84	74.47	76.80	73.66	75.14	76.99	73.79	75.36
29	76.34	73.42	74.78	76.58	72.59	74.57	76.92	73.32	75.14	76.89	73.72	75.19
30	75.66	73.24	74.24	77.17	73.87	75.52	77.00	73.68	75.36	76.34	73.11	74.71
31	76.44	73.02	74.77	---	---	---	76.78	74.98	76.01	76.74	72.86	75.00
MONTH	76.79	72.31	74.72	77.73	72.29	74.76	78.35	72.92	75.71	77.40	72.84	75.37

14128600 COLUMBIA RIVER AT STEVENSON, WA--Continued

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	77.16	73.44	75.39	76.83	73.88	75.30	76.85	75.47	76.18	77.16	74.54	75.96
2	76.91	73.28	75.11	77.10	73.55	75.30	77.40	76.30	76.78	77.62	74.32	75.94
3	76.84	73.85	75.19	77.82	74.26	76.28	77.24	74.89	76.35	76.97	74.80	76.18
4	76.95	73.86	75.52	76.76	74.14	75.51	77.23	74.61	75.69	76.35	73.51	74.98
5	76.76	74.96	76.03	76.97	74.79	75.78	77.28	75.16	76.14	77.43	75.01	76.02
6	76.69	74.09	75.42	76.80	73.89	75.56	77.49	75.25	75.99	77.34	75.37	76.04
7	76.90	73.62	75.46	76.74	73.70	75.26	76.41	73.38	74.58	75.89	74.90	75.23
8	77.15	73.81	75.52	77.23	73.90	75.66	76.09	73.95	75.07	76.08	74.35	75.27
9	77.17	74.11	75.54	76.66	74.22	75.76	76.15	74.86	75.42	77.35	74.10	75.54
10	77.28	74.08	75.77	76.43	74.52	75.65	77.43	75.80	76.67	77.58	74.23	76.21
11	76.68	73.68	75.27	76.79	73.57	75.11	77.34	75.26	76.37	77.24	73.45	75.57
12	76.57	75.14	75.51	76.47	74.48	75.34	76.69	75.14	76.12	78.10	75.19	76.89
13	76.21	73.16	74.83	76.48	72.57	74.41	77.48	75.44	76.58	77.91	74.24	76.09
14	76.68	73.91	75.23	77.20	73.55	75.38	77.43	74.06	76.00	77.82	74.40	76.09
15	76.77	74.18	75.42	77.19	74.20	76.06	77.62	74.25	76.18	77.96	75.60	76.76
16	76.55	73.44	74.89	76.78	73.22	74.94	77.46	74.80	76.30	77.91	74.79	76.19
17	77.02	73.86	75.52	76.67	72.85	74.73	77.01	74.03	75.55	77.47	74.72	75.91
18	76.88	74.10	75.59	76.51	73.15	74.83	77.12	73.38	75.29	78.16	75.79	76.84
19	76.82	74.60	75.57	76.54	73.69	75.00	77.36	73.82	75.76	78.20	76.93	77.78
20	76.11	74.18	75.03	76.75	72.80	75.12	77.79	74.25	76.22	76.93	73.77	75.09
21	75.68	73.21	74.69	76.74	73.41	75.17	77.66	75.58	76.82	77.53	73.68	75.34
22	75.48	73.11	74.68	77.23	74.11	75.77	77.07	73.79	75.65	77.35	73.92	75.41
23	76.30	73.22	74.84	77.27	75.33	76.39	76.01	73.64	74.51	77.40	76.35	76.86
24	76.48	73.25	75.18	76.99	74.68	75.93	76.58	73.83	75.04	77.53	76.27	77.06
25	77.13	74.16	75.63	77.19	74.51	75.90	77.09	73.52	75.15	76.61	75.17	75.79
26	76.98	75.20	75.84	77.22	74.68	75.49	77.19	73.83	75.55	77.59	75.13	76.22
27	76.59	74.09	75.35	76.99	73.74	75.27	77.19	74.70	76.04	77.71	76.24	76.87
28	76.12	73.07	74.74	77.07	74.61	76.04	76.97	74.27	75.50	76.40	75.28	75.68
29	---	---	---	77.52	76.17	76.69	76.91	73.83	75.30	76.94	75.34	76.04
30	---	---	---	77.39	75.56	76.38	77.78	74.33	76.12	76.82	75.03	75.96
31	---	---	---	77.68	76.63	77.11	---	---	---	77.11	74.69	75.97
MONTH	77.28	73.07	75.31	77.82	72.57	75.59	77.79	73.38	75.83	78.20	73.45	76.06

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	77.49	75.91	76.83	77.69	74.33	76.05	76.85	72.83	75.01	77.06	73.95	75.12
2	77.26	75.43	76.33	77.25	74.30	76.14	77.20	73.24	75.34	75.58	73.43	74.37
3	77.03	74.68	75.51	77.30	74.72	76.22	77.04	73.29	75.16	75.24	73.86	74.54
4	77.15	76.25	76.71	77.12	73.92	75.75	77.26	73.23	75.13	74.78	73.36	74.07
5	77.43	73.48	75.65	78.11	74.38	76.09	76.55	74.33	75.43	75.54	72.51	73.48
6	77.32	73.61	75.44	78.07	74.40	75.32	75.78	74.18	74.71	76.54	72.68	74.02
7	77.40	76.01	76.76	77.24	73.67	75.51	76.42	72.35	74.25	77.28	76.28	76.65
8	77.31	75.77	76.64	77.22	74.53	75.42	76.70	72.88	75.04	77.40	76.40	76.92
9	76.97	73.83	75.61	78.04	74.60	76.19	76.93	73.06	74.88	77.36	74.93	76.02
10	76.60	75.57	76.05	77.98	74.78	76.02	76.96	73.36	75.16	76.84	74.42	75.04
11	76.12	74.30	75.02	77.13	73.63	75.42	77.03	74.00	75.66	76.32	72.49	74.41
12	76.58	74.53	75.56	77.14	75.60	76.35	76.24	74.55	75.41	76.29	72.91	74.61
13	77.07	73.76	74.97	77.01	74.09	75.73	76.24	72.82	74.56	76.54	72.97	74.76
14	77.36	74.26	75.63	77.13	74.44	75.95	76.24	72.15	73.96	76.23	73.30	75.21
15	77.64	74.50	76.03	76.92	74.48	75.61	76.80	73.25	75.18	76.74	73.08	74.62
16	77.42	73.52	75.16	76.73	75.62	76.14	77.29	73.21	75.53	77.09	75.89	76.47
17	77.66	75.30	76.45	77.11	73.63	75.72	77.05	74.04	75.62	77.31	74.49	75.57
18	77.55	74.57	75.90	77.87	74.26	75.66	76.38	73.25	74.94	76.66	73.77	74.95
19	76.92	73.76	75.64	77.55	74.11	75.81	76.53	74.00	75.26	77.43	75.61	76.59
20	76.62	73.49	74.98	76.49	73.50	75.22	76.28	74.50	75.11	77.06	74.24	75.83
21	76.71	73.06	75.24	76.74	72.67	74.79	75.27	72.53	74.09	76.86	75.29	76.07
22	77.47	73.48	75.39	76.69	73.12	74.50	75.48	72.51	74.12	77.05	74.32	75.82
23	77.84	74.12	75.92	77.20	74.60	75.84	75.45	72.82	74.04	76.97	75.07	75.72
24	77.12	74.22	75.61	77.06	74.47	76.00	75.42	72.44	74.01	76.48	74.95	75.45
25	77.35	73.24	75.21	77.01	73.75	75.36	76.30	72.95	74.34	77.07	73.40	75.28
26	77.76	73.96	75.74	77.40	73.95	75.77	76.68	74.32	75.50	76.88	73.93	75.44
27	77.48	73.81	75.53	77.09	73.54	75.32	76.34	75.04	75.41	76.47	73.52	75.28
28	76.87	73.55	75.02	76.64	73.27	74.42	76.99	73.36	75.08	76.73	73.38	75.13
29	77.25	73.70	75.46	76.65	73.89	74.88	77.14	74.77	75.99	76.90	74.58	75.89
30	77.86	74.15	75.83	75.03	73.79	74.27	76.58	73.25	74.84	76.31	73.71	74.95
31	---	---	---	76.48	72.55	74.18	77.67	75.17	76.47	---	---	---
MONTH	77.86	73.06	75.73	78.11	72.55	75.54	77.67	72.15	75.01	77.43	72.49	75.28
YEAR	78.35	72.15	75.41									

14128890 COLUMBIA RIVER NEAR BONNEVILLE, OR

LOCATION.--Lat 45°37'35", long 121°58'22", in sec.29, T.2 N., R.7 E., Multnomah County, Hydrologic Unit 17080001, on left bank 0.2 mi (0.3 km) upstream from Moffett Creek, 2.2 mi (3.5 km) downstream from Bonneville Dam, at mile 143.5 (230.9 km).

DRAINAGE AREA.--239,900 mi^2 (621,300 km^2), approximately.

PERIOD OF RECORD.--October 1973 to current year (gage heights only).

REVISED RECORDS.--WDR-OR 77-1: 1974-76(m).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 33.12 ft (10.095 m) June 22, 1974; minimum was less than 7.5 ft (2.29 m) Oct. 6, 8, 1973, Oct. 3, 1975, July 7-10, 17, Aug. 6, 7, 9, 14, 27, Sept. 2, Oct. 22-24, 1977, when stage was known to be less than the lower recording limit.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 24.43 ft (7.446 m) Dec. 15; minimum was less than 7.5 ft (2.29 m) Oct. 22-24, when stage was known to be less than the lower recording limit.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	10.93	8.65	10.00	12.08	10.66	11.35	17.03	13.77	15.33	12.96	11.53	12.37
2	9.83	7.60	8.75	12.52	11.77	12.24	21.71	14.90	17.70	12.42	11.17	11.46
3	11.67	9.74	10.87	12.81	10.81	11.91	21.99	18.79	20.82	14.81	11.38	13.22
4	11.60	9.00	10.46	11.78	10.23	11.30	18.76	17.55	18.04	16.60	12.90	15.06
5	10.25	9.04	9.74	11.77	10.00	10.83	19.72	16.91	18.09	16.60	13.26	15.06
6	11.89	10.09	11.42	9.79	8.98	9.28	18.98	16.21	17.42	16.06	14.81	15.26
7	12.11	11.11	11.73	10.33	9.09	9.72	19.34	15.99	17.00	15.82	15.43	15.61
8	11.80	8.19	9.22	12.03	9.55	11.06	19.32	15.50	17.52	15.73	14.07	14.87
9	9.76	7.98	8.69	12.68	11.72	12.17	18.94	15.81	17.03	14.70	13.88	14.16
10	9.22	7.88	8.50	12.69	11.06	12.00	16.46	14.68	15.09	17.82	14.45	16.25
11	10.10	8.21	8.88	11.07	9.52	10.26	14.85	12.78	13.67	17.18	15.79	16.88
12	10.63	8.26	9.78	10.34	8.89	9.53	20.76	14.78	17.62	18.07	16.83	17.43
13	10.89	9.04	10.34	10.45	8.86	9.46	23.05	19.18	21.42	17.74	16.04	16.82
14	10.61	8.10	9.34	11.88	9.18	10.42	23.56	22.95	23.30	16.79	15.47	15.95
15	8.96	7.70	8.16	11.98	9.94	11.15	24.43	23.06	23.72	15.87	13.58	14.65
16	9.38	7.50	8.09	13.29	11.98	13.00	23.58	22.60	23.22	18.71	14.56	16.34
17	10.21	8.60	9.29	16.44	12.46	13.45	23.41	22.40	22.95	16.72	14.90	16.16
18	11.37	9.65	10.42	18.63	11.29	14.50	22.40	20.71	21.61	18.22	16.28	17.31
19	10.83	9.22	10.07	16.83	12.22	13.18	20.66	19.06	18.85	18.17	17.51	17.86
20	10.91	9.17	10.14	12.22	11.50	11.97	18.83	17.35	18.26	17.51	15.06	16.18
21	9.54	8.54	9.35	15.31	11.34	14.58	17.41	15.24	16.21	16.30	14.84	15.36
22	9.05	---	---	16.44	13.45	14.83	16.60	14.74	15.49	16.23	14.77	15.46
23	8.49	---	---	16.05	13.02	13.87	15.72	14.28	15.24	18.28	14.73	16.83
24	9.70	---	---	13.27	12.81	13.01	14.91	13.45	13.94	---	---	---
25	9.61	7.50	8.34	16.12	12.80	14.35	13.42	11.38	12.13	---	---	---
26	10.83	7.71	9.52	16.10	15.47	15.89	12.32	10.65	11.54	---	---	---
27	12.22	10.14	11.29	15.92	14.35	14.78	13.82	12.22	12.38	---	---	---
28	12.15	10.44	11.37	15.43	14.03	14.62	14.51	13.96	14.32	---	---	---
29	11.71	9.36	10.32	15.15	14.54	14.86	15.06	14.37	14.77	---	---	---
30	10.19	8.97	9.47	15.87	14.15	14.59	14.97	13.33	14.19	---	---	---
31	11.78	9.15	10.21	---	---	---	14.55	12.80	13.77	17.91	15.20	15.98
MONTH	12.22	7.50	9.78	18.63	8.86	12.47	24.43	10.65	17.18	18.71	11.17	15.52

14128890 COLUMBIA RIVER NEAR BONNEVILLE, OR--Continued

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	18.07	14.79	15.84	17.18	16.25	16.50	19.96	17.00	18.61	21.13	19.26	20.26
2	18.13	15.08	16.27	16.90	15.86	16.24	20.63	17.14	19.44	20.51	18.69	19.73
3	17.15	14.46	16.05	19.55	15.01	17.10	21.73	20.55	21.09	21.08	20.48	20.83
4	15.45	13.28	14.17	16.95	12.00	13.70	21.02	19.69	20.17	20.93	19.61	20.54
5	16.56	14.29	15.17	13.51	12.00	12.56	19.97	11.16	19.24	22.09	20.55	21.24
6	16.97	13.40	15.35	17.40	13.81	15.28	20.37	18.90	19.33	22.21	20.72	21.54
7	18.85	14.05	16.31	15.82	14.16	14.54	20.80	18.32	19.55	20.76	18.86	19.43
8	18.61	15.68	17.14	14.91	13.87	14.62	19.07	17.38	18.13	21.22	19.54	20.71
9	19.01	16.30	17.65	15.98	14.00	14.89	18.26	18.04	18.14	20.71	19.17	19.81
10	19.11	15.84	17.48	16.26	15.45	15.80	20.77	18.00	19.34	20.73	17.55	19.53
11	18.57	16.47	17.31	15.62	14.48	14.76	20.57	18.50	19.56	20.19	18.45	19.61
12	17.35	14.74	16.04	15.63	13.41	14.02	20.18	17.00	19.00	21.50	19.88	20.35
13	16.77	13.75	14.85	15.04	13.10	13.71	20.50	19.60	19.80	20.49	18.44	19.68
14	16.31	14.41	15.26	17.23	13.15	14.90	20.67	18.90	19.82	19.75	17.69	18.58
15	16.68	16.20	16.45	17.62	12.66	16.14	20.63	18.30	19.50	21.86	19.71	20.75
16	16.92	16.37	16.67	17.59	13.31	14.94	19.89	15.94	17.83	21.87	21.00	21.47
17	16.85	16.43	16.60	15.97	13.41	14.61	19.50	16.00	17.58	21.66	21.00	21.48
18	16.73	13.37	14.25	16.24	12.65	14.20	18.31	17.63	17.94	22.54	21.24	21.62
19	14.05	12.46	13.12	14.05	12.19	12.86	18.76	16.93	17.68	22.89	21.56	22.24
20	15.27	13.07	14.27	15.52	12.00	14.64	20.15	18.37	19.20	21.15	17.94	18.84
21	17.97	13.41	15.84	15.52	13.70	14.66	20.09	18.06	19.25	19.41	16.66	17.90
22	16.92	14.47	15.71	15.82	14.21	14.98	19.89	15.99	16.85	20.63	19.37	19.72
23	15.62	13.73	14.55	17.82	15.78	16.88	18.05	15.58	17.05	21.59	20.66	21.25
24	16.88	15.07	15.75	18.28	16.92	17.84	18.34	17.59	17.96	22.71	21.46	22.31
25	15.57	14.61	15.01	18.23	17.00	17.55	19.34	17.30	17.96	22.24	21.75	22.08
26	15.03	14.26	14.78	17.25	16.72	17.06	19.52	17.39	18.35	21.81	21.44	21.60
27	16.46	14.13	15.79	17.64	15.11	17.04	20.33	17.12	18.95	21.61	20.39	21.36
28	16.76	16.22	16.51	17.74	17.45	17.62	21.17	17.86	19.71	20.46	17.88	18.67
29	---	---	---	18.93	17.55	18.41	20.26	19.03	19.80	19.16	17.63	17.96
30	---	---	---	19.01	18.00	18.84	20.84	18.60	19.86	20.87	19.13	20.16
31	---	---	---	20.85	18.84	19.85	---	---	---	19.42	18.56	18.89
MONTH	19.11	12.46	15.72	20.85	12.00	15.70	21.73	11.16	18.89	22.89	16.66	20.33

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMHER	
1	20.67	18.62	19.74	18.88	15.31	17.21	16.00	13.13	14.29	15.52	11.62	13.63
2	20.10	18.08	19.04	17.33	14.45	16.29	16.68	13.23	15.06	11.82	8.98	10.57
3	17.89	15.12	15.82	16.28	14.63	15.16	16.62	13.21	14.64	10.48	8.13	9.55
4	18.35	16.21	17.19	16.16	14.49	15.52	15.34	11.92	13.52	10.26	7.99	9.51
5	19.97	16.44	17.92	19.41	14.40	16.88	11.93	9.55	10.18	12.25	8.10	10.33
6	19.20	17.05	18.26	19.42	16.64	18.21	10.30	7.85	9.42	15.78	12.35	13.58
7	19.29	17.90	18.70	17.72	16.46	16.90	13.26	9.19	10.92	17.68	15.77	16.63
8	21.18	19.04	20.03	17.18	13.82	15.40	14.38	11.87	12.70	16.67	16.13	16.40
9	22.43	19.72	21.05	18.72	14.59	15.40	12.88	11.70	12.45	16.57	13.62	15.39
10	23.08	22.41	22.81	18.96	18.34	18.65	12.88	12.17	12.42	14.33	11.58	12.96
11	23.05	20.50	21.61	18.82	17.16	17.67	14.05	11.36	12.61	14.15	11.70	12.99
12	21.93	21.21	21.70	20.02	18.00	18.91	11.53	8.15	9.86	14.24	12.83	13.26
13	21.21	19.87	20.26	18.75	17.64	18.32	9.80	8.09	9.18	15.26	12.83	13.95
14	20.17	19.71	19.86	18.66	18.32	18.44	11.56	7.67	9.77	17.68	15.00	16.59
15	20.72	19.63	19.98	18.43	15.04	16.37	12.28	11.49	11.97	17.57	13.08	14.79
16	22.04	18.50	20.61	15.16	13.58	14.11	13.34	12.00	12.66	14.30	12.07	12.94
17	19.25	17.96	18.67	17.52	13.53	15.57	13.19	12.20	12.63	13.33	11.69	12.35
18	19.21	16.95	18.12	17.79	15.93	16.66	13.14	12.30	12.66	14.50	11.79	13.18
19	19.77	16.56	18.39	17.85	15.38	16.20	12.63	9.90	11.23	16.90	13.75	15.54
20	19.61	18.33	19.10	16.17	13.93	15.02	10.37	9.40	9.85	16.12	14.65	15.08
21	19.22	16.67	18.27	18.51	14.70	15.94	13.11	10.45	12.36	14.93	13.31	14.36
22	19.33	16.43	17.67	17.04	13.66	14.83	12.79	10.97	11.88	15.43	13.05	13.69
23	18.78	15.00	17.40	14.97	12.19	12.99	12.57	10.86	11.41	15.53	11.15	11.97
24	18.54	16.18	16.85	17.89	15.19	16.32	12.63	11.88	12.34	11.53	10.75	11.01
25	18.40	15.02	16.15	16.20	14.43	15.34	12.73	9.60	11.54	14.86	10.65	12.28
26	19.99	17.39	18.34	16.73	14.46	15.35	9.91	9.11	9.44	13.15	11.72	12.59
27	20.07	16.51	17.91	15.29	14.20	14.80	10.63	9.11	9.94	13.35	12.01	12.54
28	19.55	17.00	18.44	14.46	12.33	13.53	11.27	10.20	10.79	12.59	11.08	12.01
29	18.95	17.30	18.17	12.74	9.68	11.61	14.35	10.00	12.89	12.07	10.98	11.43
30	19.02	16.80	18.11	9.95	9.44	9.68	14.40	12.11	13.03	12.74	11.79	12.39
31	---	---	---	14.34	9.61	12.26	16.81	12.05	14.64	---	---	---
MONTH	23.08	15.00	18.87	20.02	9.44	15.66	16.81	7.67	11.88	17.68	7.99	13.12
YEAR	24.43	7.50	15.47									

14128910 COLUMBIA RIVER AT WARRENDALE, OR
(National stream-quality accounting network station)

LOCATION.—Lat 45°36'45", long 122°01'35", in NE¼SE¼ sec.35, T.2 N., R.6 E., Multnomah County, Hydrologic Unit 17080001, on left bank 0.1 mi (0.2 km) downstream from Tumult Creek, 1.0 mi (1.6 km) west of Warrendale, 5.1 mi (9.2 km) downstream from Bonneville Dam, and at mile 141.0 (226.9 km).

DRAINAGE AREA.—240,000 mi² (621,600 km²), approximately.

WATER-STAGE RECORDS

PERIOD OF RECORD.--October 1971 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height recorded, 30.91 ft (9.421 m) June 20, 1972; minimum, 4.49 ft (1.369 m) July 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 22.25 ft (6.782 m) Dec. 15; minimum, 5.15 ft (1.570 m) Oct. 22, 23.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.87	7.05	7.76	9.75	8.31	8.88	13.73	11.64	12.75	10.48	8.76	9.33
2	8.04	5.89	6.72	9.76	9.43	9.69	18.88	12.87	15.01	8.99	7.93	8.34
3	8.42	7.32	7.77	9.79	8.59	9.34	19.35	17.35	18.74	11.19	8.23	9.65
4	8.44	6.67	7.68	8.75	7.92	8.45	17.30	15.88	16.40	12.65	10.48	11.65
5	7.34	6.58	6.98	8.88	7.72	8.29	16.52	15.06	15.79	13.56	10.87	12.20
6	8.72	7.23	8.21	8.07	6.84	7.31	16.17	14.61	15.31	13.27	12.29	12.76
7	9.00	8.42	8.65	8.10	6.84	7.44	15.88	14.25	14.95	13.09	12.58	12.81
8	8.75	6.29	7.23	9.16	7.26	8.19	16.14	14.08	14.99	12.98	12.00	12.51
9	7.32	5.89	6.57	9.88	8.78	9.22	15.73	13.87	14.49	12.70	11.51	11.98
10	6.99	5.83	6.33	9.69	8.87	9.35	14.72	12.55	13.12	14.85	12.18	13.39
11	7.22	6.03	6.59	9.26	7.57	8.29	13.17	11.52	12.20	14.35	13.70	14.05
12	8.27	5.97	7.09	8.84	6.86	7.79	17.51	13.04	14.82	14.59	13.82	14.24
13	8.67	7.38	7.95	8.90	7.10	7.81	20.97	16.95	18.87	14.39	13.13	13.61
14	8.48	6.28	7.36	9.76	7.32	8.44	21.69	20.90	21.39	13.70	12.57	12.93
15	7.75	5.82	6.53	10.02	8.22	9.24	22.25	21.61	21.91	12.99	11.28	12.14
16	7.63	5.65	6.42	10.70	9.95	10.42	21.90	21.10	21.46	14.65	11.62	12.84
17	8.01	6.42	7.01	11.83	9.94	10.49	21.50	20.56	21.13	14.13	12.63	13.32
18	8.44	7.27	7.81	13.51	9.86	11.20	20.55	18.92	19.80	14.61	13.15	13.75
19	8.59	7.09	7.70	13.29	9.58	10.74	18.86	16.65	17.89	14.74	14.42	14.62
20	8.06	6.83	7.62	9.52	8.60	9.02	16.64	15.04	15.75	14.42	12.54	13.50
21	7.21	6.34	6.78	11.46	8.37	10.41	15.07	13.29	13.84	13.27	12.15	12.53
22	6.66	5.15	6.03	12.41	10.43	11.20	13.71	12.63	13.06	13.22	12.36	12.74
23	7.05	5.15	6.08	12.23	10.41	10.84	13.03	12.24	12.76	14.70	12.52	13.39
24	7.94	5.47	6.52	10.97	10.17	10.45	12.51	11.27	11.69	14.75	13.87	14.28
25	7.93	5.94	6.75	14.10	10.32	11.92	11.24	9.56	10.22	14.10	12.75	13.24
26	8.52	6.01	7.35	14.32	13.96	14.14	9.74	8.68	9.15	13.37	12.70	13.09
27	9.50	7.52	8.50	14.17	12.87	13.26	10.27	9.42	9.68	14.31	12.64	13.47
28	9.50	8.31	8.80	12.98	12.39	12.75	11.38	10.37	10.90	14.31	12.70	13.21
29	9.38	7.48	8.26	12.98	12.63	12.83	12.13	11.31	11.70	13.80	11.00	12.12
30	8.51	7.13	7.75	12.81	11.99	12.38	12.12	11.10	11.55	12.68	11.36	12.16
31	9.04	7.10	7.87	---	---	---	11.12	10.27	10.74	13.41	12.01	12.50
MONTH	9.50	5.15	7.31	14.32	6.84	9.99	22.25	8.68	14.91	14.85	7.93	12.66

14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.41	11.58	12.40	13.15	12.74	12.97	16.08	13.94	15.10	17.09	15.96	16.51
2	13.95	12.22	12.85	12.87	12.17	12.53	16.35	13.72	15.21	16.46	15.48	16.00
3	13.82	12.17	13.08	14.63	11.54	12.98	17.35	16.32	16.95	17.15	16.29	16.85
4	12.35	10.68	11.45	13.74	9.55	11.05	17.02	16.22	16.44	17.04	16.42	16.74
5	13.42	11.38	12.11	10.14	9.34	9.72	16.08	15.22	15.64	17.69	16.73	17.27
6	13.79	11.42	12.50	12.94	10.32	11.50	16.47	15.72	15.97	18.03	17.00	17.65
7	15.51	11.79	13.34	12.51	11.04	11.64	16.57	15.08	16.03	17.02	15.21	15.91
8	15.36	13.36	14.21	12.59	11.15	11.89	15.10	14.06	14.64	17.11	15.35	16.56
9	15.79	13.76	14.73	12.85	11.21	11.79	14.57	14.18	14.38	17.07	15.64	16.16
10	15.79	13.77	14.61	12.84	12.30	12.58	16.63	14.22	15.22	16.67	14.43	15.61
11	15.39	13.87	14.33	12.35	11.49	11.75	16.48	15.18	15.76	16.49	15.32	15.85
12	14.29	11.91	13.08	12.17	10.64	11.11	15.84	14.21	15.19	17.03	15.95	16.26
13	12.61	11.00	11.79	11.36	10.33	10.94	16.12	15.54	15.73	16.85	15.20	15.99
14	12.62	11.33	11.91	12.59	10.39	11.28	16.40	15.22	15.82	15.92	14.43	15.02
15	13.14	12.66	12.93	13.25	10.51	12.29	16.36	14.76	15.65	17.88	15.57	16.72
16	13.22	12.81	13.00	13.42	10.57	11.64	15.78	12.72	14.41	18.00	17.59	17.78
17	13.09	12.79	12.97	11.79	10.50	11.04	14.89	12.44	13.42	17.88	17.64	17.77
18	13.02	10.60	11.33	12.01	9.85	10.89	14.49	13.76	14.09	18.23	17.66	17.82
19	10.74	9.65	10.06	10.28	9.21	9.74	14.30	13.53	13.84	18.82	17.95	18.43
20	11.50	10.25	10.72	11.56	9.14	10.73	15.81	14.30	15.16	17.96	14.78	15.79
21	13.88	10.40	11.98	11.68	10.60	11.20	16.01	14.88	15.47	15.12	13.79	14.36
22	13.33	11.52	12.30	11.93	10.98	11.47	16.00	12.99	13.83	16.24	15.15	15.80
23	12.14	10.98	11.47	14.00	11.92	13.01	14.32	12.86	13.55	17.65	16.27	17.21
24	12.74	11.85	12.12	14.45	13.27	13.96	14.63	13.47	14.15	18.82	17.59	18.33
25	12.23	11.35	11.72	14.45	13.66	14.05	14.78	14.14	14.49	18.51	18.11	18.30
26	11.99	11.26	11.71	13.72	13.27	13.55	15.53	14.18	14.88	18.14	17.68	17.83
27	12.97	11.61	12.37	13.93	12.69	13.47	16.41	14.22	15.17	17.83	17.06	17.63
28	13.43	12.86	13.10	14.16	13.76	13.96	16.83	15.18	16.12	17.06	14.42	15.43
29	---	---	---	15.04	13.85	14.55	16.52	15.55	16.24	14.68	14.00	14.23
30	---	---	---	15.18	14.91	15.04	16.79	15.24	15.98	16.75	14.69	15.96
31	---	---	---	16.39	14.93	15.75	---	---	---	16.19	14.76	15.18
MONTH	15.79	9.65	12.51	16.39	9.14	12.26	17.35	12.44	15.15	18.82	13.79	16.55

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	16.47	14.92	15.60	14.64	12.65	13.61	11.54	9.91	10.54	11.98	9.40	10.83
2	16.47	14.95	15.39	13.49	11.74	12.88	12.09	10.35	11.36	9.34	7.55	8.42
3	15.00	11.79	12.86	12.14	11.34	11.59	12.33	10.34	11.10	8.03	6.38	7.31
4	14.10	12.06	13.14	12.31	11.37	11.89	12.07	9.54	10.58	7.98	6.15	7.23
5	15.18	13.37	13.99	14.70	11.26	12.75	9.48	7.09	7.94	9.19	6.27	7.60
6	15.21	13.89	14.61	15.00	13.42	14.48	7.69	5.96	6.99	11.61	9.00	9.79
7	15.27	14.23	14.76	13.82	12.95	13.25	9.20	6.83	7.80	13.29	11.68	12.63
8	17.03	15.16	15.88	13.34	10.78	12.14	10.02	8.60	9.27	12.96	12.35	12.66
9	17.97	16.44	17.01	13.30	10.96	11.45	10.06	8.89	9.35	12.77	10.85	12.14
10	19.00	18.00	18.68	14.76	13.37	14.41	9.62	8.94	9.26	11.25	8.91	10.27
11	19.01	16.82	17.91	14.88	13.36	13.98	9.66	9.01	9.30	10.32	9.01	9.59
12	17.94	17.30	17.70	15.66	13.70	14.71	9.10	6.21	7.60	10.76	9.72	10.16
13	17.53	16.00	16.57	15.02	14.07	14.50	7.10	6.19	6.72	11.07	9.61	10.43
14	16.09	15.86	15.97	14.68	14.41	14.56	8.10	6.02	7.03	13.64	11.11	12.50
15	16.53	15.71	15.98	14.46	11.74	13.06	9.30	8.03	8.88	13.67	10.74	12.16
16	17.37	15.52	16.74	11.75	10.21	10.94	10.12	8.83	9.57	10.65	9.70	10.14
17	15.45	14.46	14.95	13.20	10.10	11.56	10.11	9.09	9.62	10.09	8.96	9.63
18	15.39	13.48	14.61	13.32	12.45	12.95	10.14	9.18	9.63	10.79	9.22	9.98
19	15.65	13.10	14.34	13.30	12.07	12.64	9.68	7.67	8.83	12.94	10.37	11.52
20	15.58	14.95	15.41	12.62	11.22	11.71	8.17	7.04	7.63	12.98	11.26	11.84
21	15.22	13.97	14.59	13.47	11.63	12.17	9.89	7.91	9.06	11.78	10.52	11.24
22	15.36	13.63	14.18	13.40	11.13	11.77	9.93	8.52	9.06	11.09	9.88	10.30
23	14.69	12.35	13.75	11.17	9.69	10.10	9.53	7.95	8.59	11.55	8.34	9.48
24	14.71	12.78	13.49	13.49	10.90	12.31	9.41	8.87	9.16	8.78	7.83	8.22
25	13.66	11.79	12.46	12.74	11.47	11.92	9.71	7.39	8.84	10.37	7.66	8.56
26	15.24	13.66	14.26	12.52	11.28	11.72	7.84	6.48	7.08	10.21	8.84	9.44
27	15.32	13.13	14.16	11.85	10.98	11.36	7.48	6.50	7.16	9.89	9.09	9.42
28	15.37	13.52	14.47	11.10	9.40	10.34	8.22	7.27	7.86	9.37	8.48	9.03
29	15.23	13.94	14.42	9.60	7.34	8.84	10.61	7.47	9.20	8.92	8.11	8.45
30	14.69	13.50	14.29	7.63	6.74	7.15	10.62	9.17	9.93	9.75	8.70	9.23
31	---	---	---	10.30	6.79	8.56	12.17	9.06	10.71	---	---	---
MONTH	19.01	11.79	15.07	15.66	6.74	12.11	12.33	5.96	8.89	13.67	6.15	10.01
YEAR	22.25	5.15	12.28									

14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1975 to current year.
WATER TEMPERATURES: October 1975 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 242 micromhos May 15, 1977; minimum, 97 micromhos June 26, 27, 1978.
WATER TEMPERATURES: Maximum, 22.5°C Aug. 17, 18, 1977; minimum recorded, 2.0°C Jan. 3, 5, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 210 micromhos Feb. 1; minimum recorded, 97 micromhos June 26, 27.
WATER TEMPERATURES: Maximum recorded, 22.0°C Aug. 8-11; minimum recorded, 2.0°C Jan. 3, 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT 06...	1200	132000	16.2	7.7	9.6	158	K1	28	6.8	18
NOV 08...	1030	125000	12.0	7.9	9.9	185	K3	K14	8.8	20
28...	1100	132000	7.8	7.4	11.3	151	K5	47	9.4	17
JAN 25...	1000	181000	4.2	7.7	13.0	183	K3	140	13	18
FEB 13...	1200	162000	4.1	7.6	12.8	176	K2	K7	13	21
MAR 20...	1250	179000	6.3	7.7	11.7	179	35	K8	13	21
APR 21...	1100	248000	9.4	7.7	11.3	159	K1	K12	11	21
MAY 19...	1030	306000	12.7	7.7	12.7	144	K2	K3	10	16
JUN 09...	1000	287000	16.0	7.8	11.1	124	K4	90	8.2	15
JUL 11...	1300	223000	17.6	8.3	10.1	115	--	K6	7.2	13
AUG 25...	1300	123000	19.5	8.0	9.2	130	K12	21	7.0	16

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT 06...	4.7	5.4	1.1	62	12	2.7	.1	--	--	.01
NOV 08...	5.9	9.0	1.6	69	13	4.6	.2	.23	--	.04
28...	5.1	6.7	1.3	53	13	3.4	.2	.67	--	.00
JAN 25...	5.8	7.2	1.4	65	13	4.2	.2	.27	.24	.02
FEB 13...	5.9	7.2	1.5	66	15	4.2	.1	--	.03	.01
MAR 20...	6.0	6.2	1.0	69	16	4.4	.2	.18	.17	.01
APR 21...	5.0	5.7	1.3	62	12	3.1	.1	.42	.39	.03
MAY 19...	4.7	5.7	1.3	57	9.7	2.9	.2	.45	--	.00
JUN 09...	4.2	4.5	1.1	48	13	2.3	.1	.28	.33	.01
JUL 11...	3.3	4.0	1.1	29	10	2.0	.1	--	.52	.00
AUG 25...	4.1	7.1	1.0	56	10	2.1	.2	.35	.32	.06

14128910 COLUMBIA RIVER AT WARRENDALE, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
OCT									
06...	.06	--	.01	.03	--	--	1.3	64	3
NOV									
08...	.14	--	.03	.04	--	--	1.7	74	5
28...	.24	--	.02	.04	--	--	1.5	63	10
JAN									
25...	.29	.55	.04	.02	--	--	1.7	69	4
FEB									
13...	.34	.38	.04	.06	--	--	2.0	77	10
MAR									
20...	.40	.58	.03	.04	--	--	1.5	77	8
APR									
21...	.20	.62	.00	.04	1.8	.6	--	73	11
MAY									
19...	.03	--	.00	.06	--	--	3.5	59	2
JUN									
09...	.00	.34	.01	.01	--	--	3.0	55	7
JUL									
11...	.00	.52	.00	.03	1.7	.8	--	46	17
AUG									
25...	.02	.40	.03	.03	--	--	2.1	57	1

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER DAY)	TURBIDITY (JTU)	TURBIDITY (NTU)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
OCT									
06...	88	88	31400	3	--	8	2850	86	--
NOV									
08...	107	105	36100	4	--	8	2700	91	--
28...	87	88	31000	9	--	22	7840	81	12
JAN									
25...	107	102	52300	10	--	16	7820	98	23
FEB									
13...	116	108	50700	8	--	19	8310	87	22
MAR									
20...	108	109	52200	4	--	10	4830	91	5
APR									
21...	88	97	58900	4	--	21	14100	86	14
MAY									
19...	81	86	66900	--	5.2	30	24800	88	30
JUN									
09...	78	77	60400	--	4.0	26	20100	79	24
JUL									
11...	64	58	38500	--	4.4	27	16300	93	53
AUG									
25...	77	81	25600	--	4.3	11	3650	85	9

DATE	IRON, DISSOLVED (UG/L AS FE)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)
NOV									
08...	30	160	8	20	2	2	0	400	--
JAN									
25...	40	790	0	30	1	2	0	0	1
APR									
21...	20	1000	10	20	2	1	300	300	--
JUL									
11...	80	720	0	30	1	0	--	200	1

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
NOV									
08...	--	4	4	0	0	9	26	5	34
JAN									
25...	1	0	10	0	0	8	26	2	54
APR									
21...	--	0	10	0	0	13	140	--	--
JUL									
11...	3	0	0	0	0	3	23	5	19

14128910 COLUMBIA RIVER AT WARRENDALE, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL (UG/L AS SE)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
NOV								
08...	0	0	20	190	0	0	.0	.0
JAN								
25...	0	1	20	50	0	0	.0	.0
APR								
21...	0	0	20	70	0	0	.0	.0
JUL								
11...	0	0	0	20	0	0	.0	.0

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO JULY 1978

DATE	NOV 28,77	MAR 20,78	MAY 19,78	JUN 9,78	JUL 11,78
TIME	1100	1250	1030	1000	1300
TOTAL CELLS/ML	1900	8900	43000	18000	6800
DIVERSITY: DIVISION	0.4	0.3	0.1	0.1	0.2
.CLASS	0.4	0.3	0.1	0.1	0.2
..ORDER	1.3	1.3	0.8	0.8	0.6
...FAMILY	1.8	1.4	0.9	1.1	0.7
....GENUS	2.5	1.9	1.1	1.4	0.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...OOCYSTACEAE										
....ANKISTRODESMUS	18	1	380	4	*	0	160	1	*	0
....OOCYSTIS	24	1	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....SCENEDESMUS	110	6	--	-	--	-	--	-	110	2
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	130	7	3100#	35	870	2	700	4	43	1
....MELOSIRA	730#	39	1800#	20	33000#	77	13000#	74	6000#	88
....STEPHANODISCUS	91	5	--	-	--	-	--	-	72	1
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	24	1	48	1	*	0	--	-	--	-
....COCCONEIS	24	1	96	1	*	0	--	-	--	-
....RHOICOSPHENIA	12	1	--	-	*	0	*	0	--	-
...CYMBELLACEAE										
....AMPHORA	*	0	--	-	--	-	--	-	--	-
....CYMBELLA	--	-	--	-	260	1	--	-	*	0
...DIATOMACEAE										
....DIATOMA	--	-	--	-	--	-	120	1	*	0
...FRAGILARIACEAE										
....ASTERIONELLA	600#	32	3300#	37	7000#	16	2600	14	200	3
....FRAGILARIA	43	2	--	-	*	0	*	0	240	4
....HANNAEA	--	-	--	-	--	-	*	0	--	-
....SYNEDRA	--	-	48	1	610	1	*	0	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	--	-	--	-	*	0	*	0
...NAVICULACEAE										
....NAVICULA	24	1	--	-	--	-	--	-	--	-
...NITZSCHIACEAE										
....NITZSCHIA	36	2	--	-	--	-	120	1	--	-
...TABELLARIACEAE										
....TABELLARIA	--	-	--	-	--	-	740	4	43	1
.CHRYSOPHYCEAE										
..CHRYSOMONADALES										
...OCHROMONADACEAE										
....DINOBRYON	--	-	96	1	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROCCOCCALES										
...CHROCCOCCAEAE										
....ANACYSTIS	--	-	--	-	520	1	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....TRACHELOMONAS	--	-	--	-	--	-	--	-	*	0
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...PERIDINIACEAE										
....PERIDINIUM	--	-	--	-	*	0	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LENGTH OF EXPO-SURE (DAYS)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)
MAY					
19...	28	.079	.394	.090	.000
AUG					
25...	45	--	--	6.98	.000

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	185	160	157	210	183	---	158	132	107	121	
2	164	181	156	143	209	183	---	157	128	109	123	
3	161	183	155	135	205	184	---	157	127	108	124	
4	160	186	157	131	200	184	---	158	125	109	127	
5	161	188	163	129	194	182	---	156	123	108	126	
6	159	189	166	130	189	180	---	156	124	110	128	
7	162	189	168	132	184	178	---	156	123	111	130	
8	162	188	173	137	180	175	---	156	122	111	130	
9	164	190	178	143	178	174	---	157	122	112	131	
10	163	188	181	150	178	175	---	157	120	113	132	
11	162	186	171	155	178	177	---	156	116	115	133	
12	163	186	173	154	178	179	---	155	117	112	137	
13	166	184	162	153	176	180	---	153	117	112	144	
14	168	181	157	---	176	181	---	149	117	113	151	
15	170	176	163	---	175	181	---	146	115	114	156	
16	171	178	170	---	175	180	---	146	114	114	152	
17	174	183	174	---	176	179	---	145	112	113	142	
18	178	188	174	---	179	178	---	145	110	112	143	
19	183	192	175	---	180	178	---	145	107	112	142	
20	187	191	175	156	184	179	---	146	104	109	147	
21	188	185	175	163	184	182	---	147	103	112	151	
22	189	179	173	168	187	185	---	149	101	114	145	
23	192	174	174	175	189	186	---	150	98	119	140	
24	195	174	173	181	192	185	---	153	99	119	136	
25	199	161	172	185	192	---	---	155	99	121	131	
26	203	152	171	191	188	---	---	153	97	123	---	
27	203	152	171	195	187	---	157	150	97	122	---	
28	201	156	173	200	185	---	157	146	99	121	---	
29	197	157	172	203	---	---	158	142	104	121	---	
30	192	159	168	205	---	---	159	139	105	126	---	
31	187	---	165	208	---	---	---	136	---	121	---	

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.0	16.0	14.0	13.5	8.5	8.0	4.5	3.5	4.5	4.5	5.5	5.5
2	16.0	16.0	13.5	13.5	8.5	8.5	3.0	2.5	4.5	4.5	5.5	5.5
3	16.0	15.5	13.5	13.0	8.5	8.5	2.5	2.0	4.5	4.5	5.5	5.5
4	15.5	15.0	13.0	13.0	8.5	8.0	2.5	2.5	5.0	4.5	5.5	5.0
5	15.5	15.0	13.0	13.0	8.0	8.0	2.5	2.0	4.5	4.5	5.5	5.5
6	16.0	15.0	13.0	13.0	8.0	7.5	2.5	2.5	5.0	4.5	6.0	5.5
7	15.5	15.0	13.0	12.5	8.0	7.5	3.0	3.0	5.0	4.5	6.0	6.0
8	15.5	15.0	13.0	12.0	7.5	7.5	3.0	3.0	5.0	4.5	6.0	5.5
9	15.0	15.0	12.5	12.0	7.5	7.5	3.5	3.5	5.0	4.5	6.5	6.0
10	15.0	14.5	12.5	12.0	7.5	7.5	3.5	3.0	5.0	4.5	6.5	5.5
11	14.5	14.0	12.5	12.0	7.5	7.5	3.5	3.5	4.5	4.5	6.5	6.0
12	14.5	14.0	12.0	12.0	8.0	7.5	3.5	3.0	4.5	4.0	6.0	6.0
13	14.5	14.5	12.0	12.0	8.0	8.0	3.5	3.0	4.5	4.5	6.0	6.0
14	15.0	14.5	12.0	12.0	8.0	8.0	---	---	4.5	4.5	6.5	6.0
15	14.5	14.5	12.0	11.5	8.0	8.0	---	---	4.5	4.0	6.5	5.5
16	15.0	14.5	11.5	11.0	8.0	7.5	---	---	4.5	4.5	6.0	5.5
17	15.0	14.5	11.0	11.0	7.5	7.5	---	---	4.5	4.5	6.5	5.5
18	15.0	15.0	11.0	10.5	7.5	7.0	---	---	4.5	4.5	6.5	6.0
19	15.0	15.0	11.0	10.5	7.0	7.0	---	---	5.0	4.5	6.5	6.0
20	15.0	14.5	10.5	9.0	6.5	6.5	---	---	5.0	4.5	7.0	6.0
21	14.5	14.5	9.0	8.5	6.5	6.0	4.5	4.5	5.0	4.5	7.0	6.0
22	14.5	14.5	8.5	8.0	6.0	6.0	4.5	4.5	5.5	5.5	7.0	6.5
23	14.5	14.5	8.0	8.0	6.0	6.0	4.5	4.5	5.5	5.0	7.0	7.0
24	14.5	14.5	8.0	8.0	6.0	6.0	4.5	4.5	5.5	5.5	7.5	7.0
25	14.5	14.5	8.0	7.5	6.0	6.0	4.5	4.0	5.5	5.5	---	---
26	15.0	14.5	8.0	8.0	5.5	5.5	4.5	4.5	5.5	5.0	---	---
27	15.0	14.5	8.0	7.5	5.5	5.5	4.5	4.5	5.5	5.5	---	---
28	14.5	14.5	8.5	8.0	5.5	4.5	4.5	4.5	5.5	5.5	---	---
29	14.5	14.0	8.5	8.5	4.5	4.5	5.0	4.5	---	---	---	---
30	14.5	14.0	8.5	8.0	5.0	4.5	5.0	4.5	---	---	---	---
31	14.0	13.5	---	---	5.0	4.5	4.5	4.5	---	---	---	---
MONTH	16.0	13.5	14.0	7.5	8.5	4.5	5.0	2.0	5.5	4.0	7.5	5.0

14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	10.5	10.0	14.5	14.0	17.0	17.0	20.5	20.0		
2	---	---	10.5	10.5	14.5	14.0	17.0	17.0	20.5	20.0		
3	---	---	10.5	10.5	15.0	14.5	17.0	17.0	21.0	20.5		
4	---	---	10.5	10.5	15.0	14.5	17.0	17.0	21.0	20.5		
5	---	---	11.0	10.5	15.5	15.0	17.0	17.0	21.0	20.5		
6	---	---	11.5	11.0	15.5	15.0	17.5	17.0	21.5	21.0		
7	---	---	11.5	11.5	15.5	15.5	18.5	17.5	21.5	21.0		
8	---	---	12.0	11.5	15.5	15.5	18.5	18.0	22.0	21.5		
9	---	---	12.0	12.0	15.5	15.5	18.5	18.0	22.0	22.0		
10	---	---	12.0	12.0	15.5	15.5	18.5	18.0	22.0	22.0		
11	---	---	12.0	12.0	16.0	15.5	18.0	17.5	22.0	21.5		
12	---	---	12.0	12.0	16.0	15.5	18.5	18.0	21.5	21.5		
13	---	---	12.0	12.0	16.0	16.0	19.0	18.5	21.5	21.0		
14	---	---	12.0	12.0	16.0	15.5	19.5	19.0	21.0	20.5		
15	---	---	12.0	12.0	15.5	15.5	19.5	19.0	20.5	20.5		
16	---	---	12.0	12.0	15.5	15.5	19.5	19.0	20.5	20.5		
17	---	---	12.5	12.0	16.0	15.5	19.0	18.5	20.5	20.0		
18	---	---	12.5	12.5	16.5	16.0	19.0	18.5	20.0	20.0		
19	---	---	13.0	12.5	16.5	16.0	19.5	18.5	20.0	20.0		
20	---	---	13.5	13.0	16.5	16.5	20.0	19.5	20.0	20.0		
21	---	---	13.5	13.0	16.5	16.5	20.0	20.0	20.0	20.0		
22	---	---	13.5	13.0	16.5	16.0	20.5	20.0	20.0	19.5		
23	---	---	13.0	13.0	16.5	16.0	20.5	20.5	19.5	19.5		
24	---	---	13.5	13.0	16.5	16.0	20.5	20.5	19.5	19.0		
25	---	---	13.5	13.5	16.0	16.0	20.5	20.5	19.5	19.0		
26	10.5	9.5	13.5	13.5	16.5	16.0	20.5	20.0	---	---		
27	10.0	10.0	13.5	13.5	17.0	16.5	20.0	20.0	---	---		
28	10.0	10.0	14.0	13.5	17.0	17.0	20.0	20.0	---	---		
29	10.0	10.0	14.0	13.5	17.0	17.0	20.0	20.0	---	---		
30	10.5	10.0	14.0	13.5	17.0	17.0	20.5	20.0	---	---		
31	---	---	14.0	14.0	---	---	20.5	20.0	---	---		
MONTH	10.5	9.5	14.0	10.0	17.0	14.0	20.5	17.0	22.0	19.0		

14128950 COLUMBIA RIVER AT MULTNOMAH FALLS, OR

LOCATION.--Lat 45°34'45", long 122°06'55", in SW¼SE¼ sec.7, T.1 N., R.6 E., Multnomah County, Hydrologic Unit 17080001, on left bank at Multnomah Falls, 0.7 mi (1.1 km) upstream from mouth of Multnomah Creek, 2.1 mi (3.4 km) downstream from Oneonta Creek, and at mile 136.2 (219.1 km).

DRAINAGE AREA.--240,000 mi² (621,600 km²), approximately.

PERIOD OF RECORD.--November 1971 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height recorded, 31.11 ft (9.482 m) June 19, 20, 1972; minimum, 4.47 ft (1.362 m) July 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 21.49 ft (6.550 m) Dec. 17; minimum, 5.12 ft (1.561 m) Oct. 22, 23.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.87	6.98	7.69	9.67	8.23	8.75	---	---	---	10.55	8.87	9.40
2	8.06	5.88	6.65	9.85	9.35	9.59	---	---	---	9.08	8.09	8.44
3	8.35	7.25	7.69	9.71	8.54	9.29	---	---	---	11.13	8.27	9.61
4	8.41	6.64	7.65	8.64	7.85	8.40	---	---	---	12.65	10.43	11.62
5	7.20	6.47	6.90	8.78	7.64	8.22	---	---	---	13.43	10.86	12.14
6	8.54	7.15	8.10	8.17	6.75	7.23	---	---	---	13.20	12.23	12.69
7	8.88	8.33	8.56	8.01	6.71	7.34	---	---	---	13.06	12.58	12.79
8	8.63	6.20	7.16	9.09	7.21	8.12	---	---	---	12.96	12.03	12.51
9	7.21	5.86	6.50	9.78	8.70	9.15	---	---	---	12.65	11.54	11.98
10	6.93	5.79	6.28	9.63	---	---	---	---	---	14.74	12.13	13.33
11	7.16	5.99	6.55	---	---	---	---	---	---	14.27	13.69	13.99
12	8.22	5.95	7.04	---	---	---	---	---	---	14.52	13.78	14.19
13	8.60	7.32	7.88	---	---	---	---	---	---	14.38	13.15	13.61
14	8.44	6.25	7.34	---	---	---	---	---	---	13.71	12.60	12.94
15	7.68	5.78	6.50	---	---	---	---	---	---	12.97	11.27	12.11
16	7.60	5.57	6.38	---	---	---	---	---	---	14.63	11.58	12.79
17	8.00	6.36	6.97	---	---	---	21.49	20.55	21.11	14.20	12.53	13.24
18	8.37	7.23	7.75	---	---	---	20.54	18.87	19.76	14.53	13.13	13.70
19	8.50	7.06	7.65	---	---	---	18.85	16.74	17.89	14.67	14.34	14.55
20	7.98	6.77	7.57	---	---	---	16.71	15.16	15.83	14.32	12.47	13.43
21	7.14	6.27	6.71	---	---	---	15.12	13.36	13.89	13.15	12.08	12.44
22	6.66	5.12	5.99	---	---	---	13.72	12.61	13.05	13.10	12.28	12.65
23	6.99	5.12	6.02	---	---	---	13.03	12.20	12.74	14.58	12.41	13.29
24	7.82	5.44	6.46	---	---	---	12.46	11.24	11.67	14.63	13.78	14.18
25	7.85	5.93	6.70	---	---	---	11.22	9.59	10.22	14.00	12.63	13.14
26	8.45	5.96	7.29	---	---	---	9.77	8.74	9.20	13.24	12.65	12.99
27	9.44	7.49	8.45	---	---	---	10.30	9.43	9.71	14.21	12.56	13.39
28	9.41	8.23	8.76	---	---	---	11.40	10.33	10.92	14.22	12.65	13.14
29	9.34	7.44	8.21	---	---	---	12.06	11.29	11.66	13.70	10.93	12.06
30	8.41	7.06	7.66	---	---	---	12.06	11.11	11.49	12.62	11.25	12.12
31	8.93	7.03	7.77	---	---	---	11.11	10.19	10.72	13.29	11.95	12.42
MONTH	9.44	5.12	7.25	9.85	6.71	8.45	21.49	8.74	13.32	14.74	8.09	12.61

14128950 COLUMBIA RIVER AT MULTNOMAH FALLS, OR--Continued

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.33	11.54	12.35	13.10	12.67	12.92	15.93	13.78	14.97	16.96	15.82	16.40
2	13.83	12.17	12.76	13.05	12.20	12.51	16.23	13.60	15.08	16.34	15.36	15.85
3	13.72	12.08	13.00	14.58	11.48	12.92	17.33	16.24	16.88	17.00	16.20	16.70
4	12.31	10.70	11.43	14.11	9.53	11.08	16.88	16.13	16.32	16.90	16.30	16.60
5	13.28	11.38	12.08	10.05	9.31	9.64	16.08	15.14	15.52	17.60	16.62	17.20
6	13.72	11.36	12.45	12.89	10.01	11.38	16.37	15.65	15.88	17.98	16.90	17.55
7	15.36	11.77	13.24	12.55	10.92	11.58	16.50	14.94	15.92	16.90	15.16	15.80
8	15.30	13.33	14.15	12.47	11.04	11.80	14.93	13.97	14.52	17.04	15.30	16.50
9	15.69	13.78	14.63	12.75	11.11	11.67	14.43	14.10	14.27	16.90	15.54	16.00
10	15.71	13.69	14.52	12.76	12.22	12.48	16.46	14.18	15.09	16.46	14.25	15.45
11	15.26	13.80	14.25	12.35	11.38	11.64	16.27	15.03	15.62	16.30	15.20	15.70
12	14.24	11.92	13.06	11.99	10.54	11.01	15.77	14.12	15.07	16.98	18.88	16.20
13	12.56	10.97	11.75	11.20	10.29	10.80	15.97	15.40	15.60	16.74	15.08	15.90
14	12.53	11.26	11.83	12.48	10.28	11.15	16.31	15.08	15.70	15.76	14.34	14.90
15	13.05	12.53	12.81	13.15	10.43	12.20	16.23	14.61	15.53	17.74	15.48	16.60
16	13.11	12.70	12.92	13.32	10.46	11.56	15.65	12.58	14.28	17.86	17.50	17.65
17	13.03	12.73	12.88	11.71	10.36	10.93	14.78	12.35	13.31	17.76	17.58	17.65
18	12.96	10.53	11.27	11.89	9.73	10.79	14.40	13.70	13.98	18.26	17.64	17.80
19	10.74	9.58	10.00	10.16	9.11	9.64	14.16	13.42	13.74	18.78	17.70	18.30
20	11.50	10.22	10.67	11.44	9.02	10.60	15.69	14.16	15.60	17.70	14.52	15.40
21	13.77	10.35	11.86	11.55	10.53	11.10	15.90	13.70	15.34	15.12	13.62	14.20
22	13.45	11.44	12.27	11.84	10.85	11.36	15.90	12.86	13.77	16.24	15.12	15.70
23	12.26	10.92	11.38	13.80	11.83	12.87	14.20	12.75	13.45	17.50	16.24	17.10
24	12.66	11.83	12.06	14.33	13.18	13.85	14.50	13.36	14.10	18.62	17.50	18.20
25	12.14	11.31	11.65	14.33	13.58	13.95	14.62	14.05	14.37	18.36	18.02	18.20
26	11.97	11.19	11.63	13.59	13.28	13.45	15.40	14.00	14.78	18.02	17.64	17.75
27	12.83	11.52	12.25	13.82	12.61	13.36	16.24	14.00	15.02	17.66	16.86	17.50
28	13.24	12.76	12.97	14.02	13.67	13.86	16.72	15.08	16.00	16.86	14.24	15.70
29	---	---	---	14.87	13.75	14.42	16.40	15.48	16.10	14.60	13.84	14.10
30	---	---	---	15.02	14.82	14.92	16.70	15.16	15.90	16.60	14.60	15.94
31	---	---	---	16.38	14.89	15.67	---	---	---	15.94	14.66	14.65
MONTH	15.71	9.58	12.43	16.38	9.02	12.16	17.33	12.35	15.06	18.78	13.62	16.43

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	16.32	14.84	15.60	14.55	12.53	13.52	11.44	9.82	10.50	12.01	9.45	10.88
2	16.16	14.72	15.28	13.37	11.58	12.79	12.04	10.24	11.30	9.40	7.62	8.48
3	14.72	11.72	12.70	12.05	11.28	11.47	11.50	10.69	11.50	8.08	6.48	7.37
4	14.08	12.02	13.10	12.22	11.26	11.79	13.20	10.67	11.70	8.08	6.27	7.35
5	15.10	13.26	13.90	14.61	11.19	12.62	10.67	7.04	8.15	9.23	6.41	7.69
6	15.02	13.74	14.50	14.86	13.37	14.39	7.60	5.94	6.95	11.72	9.13	9.87
7	15.10	14.12	14.60	13.69	12.84	13.14	9.20	6.80	7.70	13.38	11.77	12.73
8	16.85	15.06	15.79	13.20	10.72	12.05	10.00	8.62	9.20	13.07	12.54	12.81
9	17.88	16.28	16.88	13.09	10.84	11.31	9.96	8.88	9.30	12.88	11.00	12.29
10	18.88	17.90	18.58	14.64	13.22	14.29	9.52	8.82	9.15	11.38	9.09	10.42
11	18.92	16.76	17.86	14.71	13.29	13.87	9.54	8.96	9.20	10.34	9.11	9.65
12	17.80	17.25	17.62	15.56	13.60	14.61	9.04	6.20	7.65	10.85	9.81	10.23
13	17.44	15.93	16.48	14.98	13.97	14.41	7.06	6.20	6.65	11.14	9.73	10.48
14	15.97	15.76	15.88	14.57	14.33	14.47	7.94	5.94	7.00	13.71	11.17	12.54
15	16.39	15.68	15.87	14.36	11.65	12.97	9.20	7.94	8.85	13.71	10.79	12.17
16	17.34	15.46	16.66	11.66	10.11	10.84	10.02	8.80	9.45	10.79	9.79	10.22
17	15.41	14.40	14.87	13.05	10.02	11.40	10.04	9.10	9.60	10.15	9.06	9.70
18	15.27	13.39	14.49	13.28	12.34	12.84	10.04	9.12	9.55	10.82	9.28	10.04
19	15.56	13.03	14.23	13.24	11.94	12.56	9.62	7.70	8.90	13.02	10.47	11.57
20	15.45	14.87	15.30	12.57	11.21	11.64	8.24	7.08	7.65	13.05	11.34	11.92
21	15.12	13.83	14.48	13.45	11.63	12.10	9.66	8.00	9.00	11.82	10.61	11.29
22	15.21	13.52	14.08	13.35	11.10	11.74	9.90	8.48	9.05	11.15	9.97	10.35
23	14.56	12.30	13.66	11.08	9.64	10.02	9.46	7.96	8.65	11.60	8.38	9.54
24	14.59	12.71	13.40	13.39	10.61	12.18	9.34	8.64	9.10	8.76	7.94	8.30
25	13.42	11.74	12.35	12.72	11.39	11.87	9.66	7.46	8.95	10.40	7.74	8.63
26	15.08	13.59	14.16	12.36	11.24	11.64	7.82	6.50	7.15	10.26	8.88	9.50
27	15.28	13.07	14.10	11.80	10.88	11.25	7.40	6.60	7.10	9.91	9.16	9.48
28	15.21	13.46	14.37	11.02	9.34	10.20	8.20	7.30	7.95	9.43	8.58	9.10
29	15.21	13.86	14.32	9.52	7.26	8.75	10.56	7.50	9.10	8.97	8.22	8.51
30	14.60	13.38	14.19	7.56	6.68	7.20	10.60	9.20	10.00	9.77	8.79	9.31
31	---	---	---	10.16	6.74	8.45	12.19	9.02	10.55	---	---	---
MONTH	18.92	11.72	14.98	15.56	6.68	12.01	13.20	5.94	8.92	13.71	6.27	10.08
YEAR	21.49	5.12	12.13									

14129400 COLUMBIA RIVER AT WASHOUGAL, WA

LOCATION.—Lat 45°34'30", long 122°21'10", in SE¼ sec.53, T.1 N., R.4 E., Clark County, Hydrologic Unit 17080001, on right bank on rock-fill point at south end of 17th Street, in Washougal, and at river mile 122.9 (197.7 km).

DRAINAGE AREA.—240,400 mi² (622,600 km²), approximately.

PERIOD OF RECORD.—October 1971 to current year (gage heights only).

GAGE.—Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.—Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.—Maximum recorded gage height, 28.87 ft (8.800 m) June 19, 1972; minimum, 3.68 ft (1.122 m) July 10, 1977.

EXTREMES FOR CURRENT YEAR.—Maximum gage height, 21.25 ft (6.477 m) Dec. 15; minimum, 4.45 ft (1.356 m) Oct. 22.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.77	5.97	6.69	8.77	7.02	7.62	12.03	10.54	11.38	9.92	8.50	8.91
2	7.09	5.24	5.77	8.75	8.12	8.46	17.49	11.57	13.61	8.78	7.76	8.19
3	7.34	5.95	6.48	8.59	7.60	8.18	16.08	16.55	17.63	9.70	7.61	8.63
4	7.35	5.84	6.60	7.61	6.90	7.39	16.52	14.93	15.52	11.33	9.29	10.44
5	6.36	5.32	5.86	7.56	6.53	7.16	15.22	14.20	14.74	12.12	9.72	10.97
6	7.10	6.39	6.76	7.09	5.64	6.23	14.87	13.51	14.13	11.78	11.06	11.53
7	7.49	6.91	7.20	7.01	5.69	6.39	14.68	13.31	13.88	12.39	11.55	11.90
8	7.39	5.11	6.14	7.91	6.21	7.02	14.65	13.04	13.73	12.20	11.44	11.90
9	6.28	4.96	5.61	8.57	7.38	7.94	14.65	12.96	13.43	11.87	10.94	11.34
10	6.05	4.93	5.53	8.75	7.89	8.27	13.82	11.77	12.31	13.45	11.08	12.15
11	6.36	5.29	5.90	8.36	6.61	7.55	12.26	10.96	11.46	13.04	12.56	12.79
12	7.18	5.19	6.18	7.98	6.10	7.03	16.19	12.09	13.60	13.39	12.49	12.94
13	7.66	6.18	6.87	8.00	6.28	7.02	19.95	15.95	17.70	13.36	12.36	12.66
14	7.24	5.78	6.65	8.83	6.30	7.51	20.88	19.99	20.48	12.87	11.56	12.05
15	6.94	5.04	5.88	9.00	7.33	8.29	21.25	20.61	20.85	11.95	10.39	11.18
16	6.75	4.86	5.67	9.46	8.89	9.14	21.04	20.36	20.66	13.00	10.49	11.50
17	7.11	5.54	6.09	10.16	8.64	9.09	20.66	19.67	20.24	12.75	11.27	11.92
18	7.58	6.17	6.60	11.44	8.58	9.66	19.66	17.97	18.86	13.04	11.79	12.33
19	7.52	6.00	6.49	11.41	8.32	9.43	17.96	16.26	17.10	13.29	12.88	13.13
20	6.79	5.72	6.38	8.33	7.60	8.02	16.25	14.81	15.34	12.87	11.26	12.18
21	6.23	5.09	5.75	10.31	7.53	9.27	14.69	12.96	13.46	11.67	10.78	11.16
22	6.10	4.45	5.31	10.77	9.42	9.95	12.95	11.87	12.32	11.65	11.01	11.32
23	6.30	4.46	5.38	10.80	9.30	9.72	12.22	11.36	11.90	12.82	10.99	11.71
24	6.97	4.88	5.80	9.83	9.16	9.43	11.57	10.50	10.92	12.85	12.34	12.59
25	7.03	5.10	6.03	13.07	9.36	10.98	10.46	9.27	9.79	12.45	11.16	11.70
26	7.53	5.39	6.47	13.49	13.05	13.28	9.52	8.63	8.99	11.67	11.26	11.50
27	8.41	6.48	7.43	13.31	12.13	12.48	9.57	8.97	9.27	12.59	11.09	11.72
28	8.35	7.32	7.80	12.13	11.66	11.87	10.82	9.59	10.30	12.62	11.22	11.67
29	8.08	6.47	7.26	11.94	11.63	11.80	10.94	10.26	10.62	12.07	9.90	10.76
30	7.41	6.23	6.84	11.72	10.98	11.29	10.89	10.06	10.34	11.14	10.14	10.71
31	7.84	6.12	6.80	---	---	---	10.12	9.17	9.70	11.44	10.52	10.85
MONTH	8.41	4.45	6.33	13.49	5.64	8.92	21.25	8.63	14.01	13.45	7.61	11.43

14129400 COLUMBIA RIVER AT WASHOUGAL, WA--Continued

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.51	10.24	10.86	11.60	11.09	11.31	13.93	12.05	13.14	15.01	14.13	14.55
2	11.99	10.62	11.20	11.41	10.89	11.06	14.09	11.92	13.05	14.41	13.68	14.04
3	12.19	10.67	11.58	12.69	10.30	11.34	15.30	14.11	14.87	15.01	14.13	14.73
4	11.44	9.93	10.55	12.66	8.43	10.17	14.80	14.23	14.46	14.96	14.48	14.72
5	11.76	10.51	11.00	8.90	8.11	8.49	14.25	13.40	13.77	15.52	14.65	15.19
6	12.30	10.46	11.28	11.13	8.43	9.79	14.45	13.83	14.07	15.95	15.09	15.59
7	13.72	10.96	11.93	11.15	9.62	10.28	14.56	13.30	14.17	15.06	13.40	14.10
8	13.75	12.35	12.89	10.75	9.70	10.41	13.29	12.33	12.86	15.00	13.39	14.45
9	14.14	12.64	13.26	11.01	9.75	10.19	12.72	12.29	12.52	14.94	13.74	14.22
10	14.14	12.62	13.14	11.11	10.64	10.89	14.35	12.36	13.12	14.43	12.78	13.60
11	13.73	12.27	12.82	10.77	9.83	10.15	14.26	13.27	13.71	14.35	13.50	13.87
12	12.89	10.94	11.95	10.33	9.02	9.57	13.85	12.41	13.18	14.91	13.99	14.25
13	11.12	9.97	10.57	9.61	8.90	9.31	13.87	13.38	13.60	14.85	13.51	14.12
14	10.77	9.86	10.34	10.40	8.72	9.44	14.21	13.20	13.74	14.03	12.87	13.31
15	11.32	10.79	11.05	11.15	9.27	10.39	14.17	12.83	13.62	15.77	13.66	14.73
16	11.37	10.98	11.17	11.39	8.97	9.98	13.64	11.01	12.55	16.00	15.73	15.84
17	11.25	11.03	11.16	9.91	8.83	9.29	12.69	10.77	11.50	15.93	15.78	15.85
18	11.10	9.15	9.83	10.02	8.13	9.14	12.52	11.92	12.26	16.15	15.85	15.93
19	9.12	8.22	8.69	8.59	7.57	8.13	12.23	11.80	12.01	16.82	16.09	16.49
20	10.10	8.84	9.36	9.56	7.47	8.88	13.63	12.22	13.16	16.08	13.04	14.17
21	11.92	9.02	10.14	9.91	9.09	9.46	14.05	13.03	13.53	13.18	12.38	12.65
22	11.78	10.22	10.85	10.00	9.38	9.72	14.05	11.46	12.36	14.22	13.18	13.84
23	11.00	9.59	9.93	11.91	9.97	11.03	12.75	11.51	12.03	15.58	14.26	15.15
24	11.25	10.24	10.59	12.49	11.30	12.00	12.91	11.87	12.59	16.60	15.53	16.25
25	10.77	9.90	10.27	12.64	11.91	12.24	13.21	12.53	12.83	16.45	16.17	16.31
26	10.63	9.82	10.19	11.93	11.56	11.77	13.72	12.59	13.12	16.18	15.73	15.90
27	11.17	10.21	10.61	12.02	11.25	11.65	14.44	12.70	13.33	15.81	15.20	15.66
28	11.54	10.98	11.27	12.27	11.84	12.07	14.82	13.55	14.29	15.18	12.70	13.69
29	---	---	---	12.94	11.93	12.53	14.62	13.83	14.40	12.73	12.14	12.41
30	---	---	---	13.14	12.86	13.00	14.70	13.51	14.06	14.54	12.69	13.85
31	---	---	---	14.41	12.97	13.69	---	---	---	14.16	12.91	13.37
MONTH	14.14	8.22	11.02	14.41	7.47	10.56	15.30	10.77	13.26	16.82	12.14	14.61

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	14.31	13.17	13.67	12.59	11.09	11.81	9.55	8.44	8.88	10.23	8.28	9.47
2	14.32	13.19	13.55	11.83	10.26	11.23	10.32	8.77	9.63	8.24	6.65	7.48
3	13.14	10.26	11.31	10.31	9.72	9.98	10.29	8.74	9.46	7.00	5.75	6.43
4	12.14	10.40	11.40	10.77	9.66	10.22	10.32	8.32	9.14	7.09	5.53	6.37
5	13.07	11.70	12.14	12.37	9.84	10.80	8.30	6.10	6.93	7.96	5.61	6.61
6	13.28	12.12	12.73	12.90	11.83	12.54	6.64	5.25	6.03	9.96	7.62	8.33
7	13.24	12.41	12.80	11.88	11.14	11.47	7.97	5.94	6.65	11.34	10.00	10.76
8	14.77	13.15	13.79	11.39	9.39	10.54	8.88	7.36	7.88	11.33	10.85	11.06
9	15.71	14.49	14.86	10.87	9.37	9.66	8.76	7.62	7.98	11.20	9.70	10.69
10	16.80	15.72	16.43	12.70	10.95	12.23	8.37	7.41	7.82	9.97	7.89	9.04
11	16.82	14.94	15.93	12.79	11.54	12.09	8.17	7.51	7.83	8.75	7.73	8.24
12	15.77	15.32	15.60	13.35	11.73	12.57	8.17	5.53	6.59	9.48	8.33	8.81
13	15.49	14.06	14.61	13.24	12.18	12.55	6.39	5.35	5.75	9.39	8.31	9.00
14	14.14	13.85	14.00	12.75	12.42	12.59	6.58	4.94	5.98	11.74	9.32	10.72
15	14.30	13.81	13.94	12.54	10.14	11.38	8.06	6.55	7.60	11.75	9.48	10.74
16	15.14	13.96	14.70	10.24	8.66	9.47	8.72	7.50	8.28	9.45	8.52	8.94
17	13.85	12.72	13.15	11.12	8.61	9.77	8.84	7.80	8.37	8.86	7.88	8.46
18	13.51	11.84	12.84	11.74	10.82	11.18	8.84	7.80	8.36	9.13	7.82	8.66
19	13.56	11.59	12.43	11.40	10.39	10.99	8.84	6.82	7.82	11.26	8.91	9.84
20	13.69	13.24	13.54	10.96	9.90	10.25	7.34	6.14	6.80	11.32	9.76	10.38
21	13.27	12.42	12.82	11.62	10.10	10.57	8.74	6.83	7.78	10.41	9.37	9.82
22	13.34	12.04	12.50	11.66	9.74	10.41	8.74	7.41	7.89	9.53	8.45	8.90
23	12.80	11.20	12.04	9.95	8.36	8.87	8.31	6.79	7.52	9.93	7.24	8.28
24	12.82	11.23	11.88	11.48	9.21	10.46	8.29	7.69	7.92	7.65	6.71	7.10
25	11.58	10.39	10.80	11.34	10.00	10.36	8.49	6.57	7.69	8.67	6.75	7.29
26	12.97	11.61	12.26	10.52	9.71	10.07	7.04	5.45	6.13	8.74	7.40	8.10
27	13.36	11.52	12.35	10.43	9.44	9.75	6.50	5.60	6.09	8.43	7.71	8.06
28	13.12	11.74	12.48	9.68	8.09	8.89	7.00	6.08	6.68	8.05	7.28	7.75
29	13.19	12.19	12.53	8.33	6.21	7.60	8.82	6.33	7.68	7.72	6.94	7.31
30	12.66	11.78	12.38	6.71	5.61	6.10	9.13	7.88	8.54	8.43	7.32	7.96
31	---	---	---	8.48	5.67	7.11	10.32	7.60	9.01	---	---	---
MONTH	16.82	10.26	13.18	13.35	5.61	10.44	10.32	4.94	7.64	11.75	5.53	8.69
YEAR	21.25	4.45	10.84									

14134000 SALMON RIVER NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°15'55", long 121°43'00", in SE¼NW¼ sec.31, T.3 S., R.9 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank near lower end of Red Top Meadows and 3.0 mi (4.8 km) southeast of Government Camp.

DRAINAGE AREA.--8.00 mi^2 (20.7 km^2).

PERIOD OF RECORD.--May 1910 to May 1912, April 1926 to current year. Published as "near Rowe" 1910-12.

REVISED RECORDS.--WSP 1398: 1911-12, 1926-27, 1933(M), 1949. WDR OR-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,445.53 ft (1,050.198 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 21, 1910, nonrecording gage at site 0.2 mi (0.3 km) upstream at different datum. Nov. 21, 1910, to May 31, 1912, and Apr. 21, 1926, to Sept. 30, 1933, at site 75 ft (23 m) upstream from former site at different datums. Oct. 1, 1933, to Sept. 30, 1960, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--53 years (water years 1911, 1927-78), 44.7 ft^3/s (1.266 m^3/s), 75.88 in/yr (1,927 mm/yr), 32,390 acre-ft/yr (39.9 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft^3/s (36.8 m^3/s) Dec. 23, 1964, gage height, 4.75 ft (1.448 m), from rating curve extended above 310 ft^3/s (8.78 m^3/s), on basis of slope-area measurement of peak flow; minimum, 10 ft^3/s (0.28 m^3/s) Nov. 27, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft^3/s (4.25 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 15	0830	201	5.69	2.60	0.792	Dec. 6	1830	224	6.34	2.69	0.820
Nov. 25	1800	665	18.8	3.82	1.164	Dec. 11	1030	226	6.40	2.70	0.823
Nov. 29	0430	256	7.25	2.81	0.856	Dec. 13	1600	1,060	30.0	4.43	1.350
Dec. 2	1500	*1,150	32.6	*4.55	1.387						

Minimum, 14 ft^3/s (0.40 m^3/s) Sept. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	60	140	47	37	34	41	41	36	29	19	17
2	24	57	590	45	40	33	41	41	36	28	19	17
3	22	31	190	45	48	32	38	39	36	28	19	18
4	21	27	124	49	45	32	38	39	36	28	20	16
5	20	27	91	50	50	32	39	39	36	27	19	18
6	24	26	168	47	52	31	36	40	35	26	19	17
7	30	36	109	47	56	34	34	38	35	26	19	16
8	24	26	83	55	50	37	33	38	34	25	19	17
9	22	26	74	55	45	35	34	38	38	25	19	19
10	21	27	97	50	40	34	36	37	42	25	18	21
11	20	27	151	45	38	34	35	46	42	24	19	20
12	20	26	123	49	37	31	32	41	35	24	20	17
13	20	29	659	52	36	31	32	50	35	23	21	18
14	19	82	285	53	35	30	32	49	36	23	17	18
15	19	115	183	51	34	30	32	45	38	27	32	17
16	19	59	118	50	33	31	34	44	35	31	30	16
17	18	47	98	54	33	34	34	40	33	26	22	29
18	18	42	84	49	36	35	35	39	32	24	19	28
19	18	38	75	50	37	36	34	41	31	23	18	20
20	18	35	69	49	38	38	34	41	31	22	26	17
21	18	34	66	51	37	39	34	40	30	22	23	17
22	18	35	63	46	37	41	34	41	30	22	20	17
23	20	36	63	42	36	52	35	39	30	22	19	16
24	20	71	74	41	42	45	37	39	29	22	24	16
25	26	323	72	42	39	45	41	37	32	21	21	16
26	22	161	60	42	41	45	66	38	29	26	18	16
27	20	107	56	39	37	45	63	41	28	23	17	16
28	19	90	54	42	35	44	56	42	28	20	16	15
29	23	152	53	39	---	44	47	37	28	19	17	14
30	35	84	51	37	---	45	44	35	29	19	17	15
31	30	---	47	37	---	42	---	35	---	20	17	---
TOTAL	675	1936	4170	1450	1126	1151	1161	1250	1005	750	623	534
MEAN	21.8	64.5	135	46.8	40.2	37.1	38.7	40.3	33.5	24.2	20.1	17.8
MAX	35	323	659	55	56	52	66	50	42	31	32	29
MIN	18	26	47	37	33	30	32	35	28	19	16	14
CFSM	2.73	8.06	16.9	5.85	5.03	4.64	4.84	5.04	4.19	3.03	2.51	2.23
IN.	3.14	9.00	19.39	6.74	5.24	5.35	5.40	5.81	4.67	3.49	2.90	2.48
AC-FT	1340	3840	8270	2880	2230	2280	2300	2480	1990	1490	1240	1060

CAL YR 1977 TOTAL 14975 MEAN 41.0 MAX 659 MIN 17 CFSM 5.13 IN 69.63 AC-FT 29700
WTR YR 1978 TOTAL 15831 MEAN 43.4 MAX 659 MIN 14 CFSM 5.43 IN 73.60 AC-FT 31400

14137000 SANDY RIVER NEAR MARMOT, OR

LOCATION.--Lat 45°23'30", long 122°07'40", in SE¼ sec.13, T.2 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, on right bank 0.7 mi (1.1 km) southwest of Marmot, 0.8 mi (1.3 km) upstream from Sandy River Dam of Portland General Electric Co., 6.6 mi (10.6 km) downstream from Salmon River, and at mile 30.9 (49.7 km).

DRAINAGE AREA.--262 mi² (679 km²).

PERIOD OF RECORD.--August 1911 to current year. Published as "at Marmot" October 1912 to September 1913. Records for January 1916 to June 1919, published as "below dam, near Marmot," obtained by combining records for Sandy River below dam, near Marmot, with records for Sandy River Canal near Marmot.

REVISED RECORDS.--WSP 594: Drainage area. WSP 1288: 1912(M), 1915, 1922, 1924, 1934(M). WSP 1318: 1932(M).

GAGE.--Water-stage recorder. Altitude of gage is 730 ft (223 m), from river-profile map. Aug. 15, 1911, to Dec. 20, 1915, and July 2, 1919, to Oct. 19, 1933, nonrecording gage at site 1.0 mi (1.6 km) upstream at different datum. Oct. 20, 1933, to Sept. 30, 1958, water-stage recorder at site 0.6 mi (1.0 km) upstream at different datum.

REMARKS.--Records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--67 years, 1,374 ft³/s (38.91 m³/s), 71.22 in/yr (1,809 mm/yr), 995,500 acre-ft/yr (1.23 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,400 ft³/s (1,740 m³/s) Dec. 22, 1964, gage height, 17.05 ft (5.197 m), from rating curve extended above 7,000 ft³/s (198 m³/s); minimum, 195 ft³/s (5.52 m³/s) Nov. 27, 28, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,700 ft³/s (218 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	2030	23,800	674	15.13	4.612	Dec. 6	2330	8,320	236	11.55	3.520
Dec. 2	1800	*34,500	977	*16.68	5.084	Dec. 13	1230	28,600	810	15.87	4.837

Minimum, 343 ft³/s (9.71 m³/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1140	1970	3790	1150	1380	1180	827	1390	959	566	382	427
2	891	2910	17600	1100	2030	1080	812	1240	917	553	377	433
3	749	1710	10100	1210	2260	1010	835	1140	892	572	386	449
4	650	1280	6850	1390	2000	977	804	1130	859	566	407	422
5	580	1100	4680	1420	1920	925	812	1090	843	547	391	438
6	553	961	6360	1890	2010	892	812	1080	819	541	372	454
7	818	1210	6280	1730	2070	884	766	1040	781	547	382	402
8	734	1080	4130	2030	2100	951	729	968	721	523	402	396
9	650	952	3150	2040	1920	900	700	942	758	505	391	438
10	587	883	3790	2090	1640	867	686	951	875	494	362	494
11	540	818	7630	1900	1470	859	679	1220	977	477	357	566
12	507	764	6330	2000	1340	867	665	1260	789	471	402	494
13	495	875	21000	1800	1230	867	644	1420	758	471	454	465
14	465	2610	12200	1700	1150	875	637	2070	766	482	377	471
15	453	4510	8150	1600	1120	827	637	2120	875	523	637	471
16	442	3010	5490	1600	1040	812	658	1860	796	707	714	444
17	418	2090	4280	1700	1020	843	686	1620	729	572	598	572
18	400	1640	3370	1700	1020	892	707	1410	707	517	471	851
19	388	1360	2700	1930	1040	867	758	1260	686	494	444	693
20	377	1160	2280	1770	1050	859	773	1180	658	471	517	604
21	366	1030	2000	1820	1040	851	796	1100	651	465	572	560
22	360	1030	1800	1860	1020	843	1020	1060	631	465	566	523
23	394	1190	1680	1630	1000	985	1140	1010	624	471	572	511
24	418	2910	1880	1470	1060	1020	1070	1060	604	471	624	488
25	650	14700	2250	1410	1120	968	1080	1040	631	438	651	465
26	623	10000	1920	1440	1560	934	1920	1020	598	517	547	449
27	527	5310	1680	1330	1470	917	2790	1170	572	523	488	460
28	477	4570	1530	1310	1310	892	2560	1440	572	427	460	422
29	527	6180	1460	1280	---	875	2010	1270	566	402	444	402
30	1010	4190	1390	1180	---	867	1640	1120	572	396	438	402
31	1530	---	1300	1200	---	859	---	1020	---	391	444	---
TOTAL	18719	84003	159050	49680	40390	28245	30653	38701	22186	15565	14629	14666
MEAN	604	2800	5131	1603	1443	911	1022	1248	740	502	472	489
MAX	1530	14700	21000	2090	2260	1180	2790	2120	977	707	714	851
MIN	360	764	1300	1100	1000	812	637	942	566	391	357	396
CFSM	2.31	10.7	19.6	6.12	5.51	3.48	3.90	4.76	2.82	1.92	1.80	1.87
IN.	2.66	11.93	22.58	7.05	5.73	4.01	4.35	5.49	3.15	2.21	2.08	2.08
AC-FT	37130	166600	315500	98540	80110	56020	60800	76760	44010	30870	29020	29090

CAL YR 1977 TOTAL 504568 MEAN 1382 MAX 21000 MIN 272 CFSM 5.28 IN 71.64 AC-FT 1001000
WTR YR 1978 TOTAL 516487 MEAN 1415 MAX 21000 MIN 357 CFSM 5.40 IN 73.33 AC-FT 1024000

14138800 BLAZED ALDER CREEK NEAR RHODODENDRON, OR

LOCATION.--Lat 45°27'10", long 121°53'25", in NW¼SE¼ sec.25, T.1 S., R.7 E., Clackamas County, Hydrologic Unit Unit 17080001, in Mount Hood National Forest, on right bank 600 ft (183 m) below the confluence of Bedrock and Hickman Creeks and 8.6 mi (13.8 km) north of Rhododendron.

DRAINAGE AREA.--8.17 mi² (21.16 km²).

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,540 ft (774 m), from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--15 years, 61.3 ft³/s (1.736 m³/s), 101.89 in/yr (2,588 mm/yr), 44,410 acre-ft/yr (54.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,610 ft³/s (73.9 m³/s) Dec. 22, 1964, gage height, 8.25 ft (2.515 m), from rating curve extended above 330 ft³/s (9.35 m³/s), on basis of slope-area measurement of peak flow; minimum, 1.5 ft³/s (0.042 m³/s) Sept. 5-10, 28, 29, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 1	2330	525	14.9	3.56	1.085	Dec. 6	2100	586	16.6	3.74	1.140
Nov. 15	0830	714	20.2	4.11	1.253	Dec. 11	1030	721	20.4	4.13	1.259
Nov. 25	1900	1,500	42.5	6.00	1.829	Dec. 13	0900	1,470	41.6	5.93	1.807
Dec. 2	0900	*1,830	51.8	*6.71	2.045						

Minimum, 3.0 ft³/s (0.085 m³/s) Aug. 7-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	300	206	30	75	43	23	46	25	10	4.0	11
2	39	281	1250	25	150	36	26	37	22	9.4	4.0	10
3	31	121	480	50	132	31	27	33	19	11	4.0	9.4
4	25	71	327	82	103	27	27	32	17	10	3.7	8.3
5	20	50	164	80	100	24	33	30	16	9.4	3.7	11
6	23	44	415	91	105	23	30	27	14	8.8	3.3	11
7	64	80	305	84	102	27	26	25	13	8.3	3.3	9.4
8	49	53	146	117	89	32	24	23	12	7.8	3.3	12
9	37	44	98	112	71	28	22	22	18	7.3	3.0	13
10	31	37	152	96	55	26	22	23	33	7.3	3.0	21
11	24	32	502	74	43	26	22	53	43	7.3	3.0	35
12	20	28	360	105	36	24	20	47	28	6.8	5.5	27
13	19	68	1080	86	31	25	18	68	26	6.3	11	24
14	17	332	470	69	28	23	19	128	32	5.9	5.5	22
15	15	427	255	58	26	21	19	126	46	8.3	28	21
16	14	190	136	58	24	21	22	96	36	15	28	19
17	12	98	98	96	25	23	26	74	30	9.4	21	37
18	11	64	74	86	27	26	28	55	26	8.3	14	59
19	11	47	55	71	28	26	31	44	24	7.3	13	40
20	10	37	44	69	31	27	35	37	20	6.8	22	31
21	9.4	31	39	93	35	26	40	31	18	6.3	23	26
22	9.4	30	33	84	36	27	58	30	17	5.9	22	25
23	13	66	36	61	36	44	55	26	16	5.5	23	22
24	18	201	72	49	43	49	49	27	14	5.5	39	18
25	31	964	100	44	66	44	56	26	19	5.1	36	16
26	32	532	77	50	107	37	107	32	15	5.5	27	14
27	22	265	58	42	74	35	126	51	13	5.1	21	16
28	20	257	47	40	55	31	112	47	12	4.7	17	13
29	36	397	42	39	---	28	80	39	11	4.7	14	12
30	150	177	37	35	---	27	59	33	11	4.3	13	11
31	177	---	32	44	---	25	---	28	---	4.3	12	---
TOTAL	1039.8	5324	7190	2120	1733	912	1242	1396	646	227.6	433.3	604.1
MEAN	33.5	177	232	68.4	61.9	29.4	41.4	45.0	21.5	7.34	14.0	20.1
MAX	177	964	1250	117	150	49	126	128	46	15	39	59
MIN	9.4	28	32	25	24	21	18	22	11	4.3	3.0	8.3
CFSM	4.10	21.7	28.4	8.37	7.58	3.60	5.07	5.51	2.63	.90	1.71	2.46
IN.	4.73	24.24	32.73	9.65	7.89	4.15	5.65	6.36	2.94	1.04	1.97	2.75
AC-FT	2060	10560	14260	4210	3440	1810	2460	2770	1280	451	859	1200

CAL YR 1977 TOTAL 24385.6 MEAN 66.8 MAX 1250 MIN 2.0 CFSM 8.18 IN 111.02 AC-FT 48370
WTR YR 1978 TOTAL 22867.8 MEAN 62.7 MAX 1250 MIN 3.0 CFSM 7.67 IN 104.11 AC-FT 45360

14138850 BULL RUN RIVER NEAR MULTNOMAH FALLS, OR

LOCATION.--Lat 45°29'50", long 122°00'50", near center of sec.12, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 1.2 mi (1.9 km) above North Fork, 7.0 mi (11.3 km) southeast of Multnomah Falls, and at mile 14.8 (23.8 km).

DRAINAGE AREA.--47.9 mi² (124.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,080 ft (329 m), from topographic map.

REMARKS.--Water-discharge records excellent. Water stored since 1915 in Bull Run Lake, usable capacity, 12,270 acre-ft (15.1 hm³). No diversion above station.

AVERAGE DISCHARGE.--12 years, 440 ft³/s (12.46 m³/s), 124.74 in/yr (3,168 mm/yr), 318,800 acre-ft/yr (393 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,610 ft³/s (244 m³/s) Jan. 20, 1972, gage height, 13.22 ft (4.029 m); minimum, 33 ft³/s (0.93 m³/s) Sept. 27, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,800 ft³/s (108 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	1800	6,500	184	11.60	3.536
Dec. 2	1400	*8,510	241	*13.16	4.011
Dec. 6	1900	3,910	111	9.28	2.829
Dec. 11	1030	4,230	120	9.58	2.920
Dec. 13	1000	7.960	225	12.75	3.886

Minimum daily, 52 ft³/s (1.47 m³/s) Aug. 11.

DISCHARGF, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	354	1600	1470	236	533	460	203	320	214	113	64	140
2	280	1650	6020	220	1020	380	223	275	197	110	62	130
3	232	766	3010	339	859	320	234	248	180	113	60	120
4	199	486	1460	517	630	280	241	248	167	116	58	130
5	173	380	1030	521	574	250	297	236	157	110	57	150
6	184	320	2770	604	630	230	270	220	146	103	56	140
7	505	537	1850	529	617	240	243	203	135	100	55	130
8	396	400	919	718	578	265	225	191	128	96	54	130
9	297	329	617	666	501	239	207	187	173	93	54	200
10	241	280	1090	595	403	223	203	199	255	92	53	300
11	207	246	3170	478	345	220	197	370	326	85	52	520
12	182	232	2180	639	300	214	182	329	236	80	100	400
13	165	525	5570	529	268	220	177	541	227	80	150	265
14	148	1820	3150	456	246	212	180	1080	268	75	90	241
15	131	2300	1840	403	236	201	187	854	373	100	260	220
16	119	1050	1050	403	214	199	216	612	303	180	280	195
17	110	617	757	578	225	205	234	467	255	150	220	268
18	103	452	587	566	243	210	268	373	229	130	180	410
19	97	348	475	537	256	210	278	315	214	120	160	289
20	92	278	396	525	268	210	300	272	189	110	210	239
21	87	241	364	643	270	207	364	243	173	100	240	220
22	83	232	312	643	265	207	513	232	163	100	220	207
23	108	505	326	475	258	292	463	214	153	100	220	199
24	157	1340	634	366	283	323	393	223	146	95	300	173
25	253	5090	747	354	410	309	403	220	165	95	312	155
26	280	2770	549	393	900	275	722	218	148	90	260	140
27	212	1630	431	335	750	255	881	345	133	85	220	138
28	187	1550	364	329	600	243	713	367	124	80	190	126
29	309	2470	332	320	---	232	513	303	121	75	170	114
30	925	1070	317	289	---	232	396	263	119	70	150	114
31	1050	---	280	326	---	216	---	234	---	66	150	---
TOTAL	7866	31514	44451	14552	12684	7799	9926	10402	5817	3112	4707	6203
MEAN	254	1050	1434	469	453	252	331	336	194	100	152	207
MAX	1050	5090	6020	718	1020	480	881	1080	373	180	312	520
MIN	83	232	280	220	214	199	177	187	119	66	52	114
CFSM	5.30	21.9	29.9	9.79	9.46	5.26	6.91	7.02	4.05	2.09	3.17	4.32
IN.	6.11	24.47	34.52	11.30	9.85	6.06	7.71	8.08	4.52	2.42	3.66	4.82
AC-FT	15600	62510	88170	28860	25160	15470	19690	20630	11540	6170	9340	12300

CAL YR 1977 TOTAL 161821 MEAN 443 MAX 6020 MIN 34 CFSM 9.25 IN 125.67 AC-FT 321000
WTR YR 1978 TOTAL 159033 MEAN 436 MAX 6020 MIN 52 CFSM 9.10 IN 123.51 AC-FT 315400

14138850 BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1977 to current year.
WATER TEMPERATURES: October 1977 to current year.
SUSPENDED SEDIMENT DISCHARGE: October 1977 to current year.

INSTRUMENTATION.--Conductivity/temperature recorder since October 1977. Automatic pumping sediment sampler since October 1977.

REMARKS.--Conductivity/temperature recorder damaged by flood and out for repair Nov. 26 to Feb. 23. Weekly conductivity and temperature values for this period are listed with chemical data.

COOPERATION.--Chemical data were analyzed by the City of Portland Water Quality Laboratory and were reviewed by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 31 micromhos June 6; minimum recorded, 10 micromhos Nov. 25.
WATER TEMPERATURES: Maximum recorded, 16.5°C Aug. 7-9; minimum recorded, 0.0°C Nov. 22.
SEDIMENT CONCENTRATIONS: Maximum, 290 mg/l Dec. 2; minimum, 0 mg/l on many days throughout the year.
SEDIMENT DISCHARGE: Maximum, 5,930 tons (5,380 tonnes) Dec. 2; minimum, 0 ton (0 tonne) on many days throughout the year.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	15			---	21	18	19	23	25	27	---
2	---	15			---	19	18	20	22	25	27	---
3	---	16			---	19	18	20	22	24	27	---
4	---	17			---	19	18	20	---	23	27	---
5	---	18			---	19	19	19	26	---	28	21
6	---	19			---	21	19	19	27	---	28	21
7	---	17			---	21	21	21	24	---	28	22
8	---	17			---	20	21	20	25	---	28	21
9	---	18			---	20	20	20	24	---	28	21
10	---	19			---	19	20	19	23	---	28	20
11	---	19			---	19	20	19	23	---	28	20
12	---	19			---	20	19	19	24	---	27	21
13	---	17			---	20	20	18	24	---	26	21
14	---	14			---	20	20	21	23	---	27	22
15	---	13			---	21	20	21	24	---	25	21
16	---	15			---	21	19	21	25	---	21	21
17	---	16			---	19	---	21	25	---	23	22
18	---	17			---	19	21	21	24	---	21	22
19	---	17			---	19	21	21	23	---	20	22
20	19	18			---	20	21	21	23	---	21	22
21	20	19			---	19	20	20	23	---	22	22
22	21	19			---	20	17	19	23	---	21	22
23	20	18			20	19	18	18	23	---	21	22
24	20	15			18	17	18	17	22	---	22	22
25	18	11			18	18	18	19	23	---	23	23
26	17	---			19	18	18	18	24	---	21	23
27	20	---			20	19	20	19	25	---	20	23
28	21	---			21	19	20	19	25	[illegible]	19	---
29	19	---			---	19	19	20	25	27	---	---
30	17	---			---	18	20	21	26	27	---	---
31	16	---			---	18	---	21	---	27	---	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	8.0	7.0					---	---	4.0	3.0
2	---	---	7.5	6.5					---	---	3.0	2.5
3	---	---	6.5	5.5					---	---	3.0	2.0
4	---	---	6.0	5.0					---	---	3.5	2.0
5	---	---	7.0	5.5					---	---	4.0	3.0
6	---	---	7.0	6.5					---	---	5.0	3.5
7	---	---	7.0	5.5					---	---	5.5	5.0
8	---	---	5.0	4.5					---	---	6.0	4.5
9	---	---	6.0	5.0					---	---	6.0	4.0
10	---	---	7.5	6.0					---	---	5.5	3.5
11	---	---	7.0	6.5					---	---	5.5	4.0
12	---	---	7.0	6.5					---	---	4.5	3.5
13	---	---	7.0	6.5					---	---	4.0	3.5
14	---	---	7.0	6.5					---	---	4.5	3.5
15	---	---	7.5	7.0					---	---	5.0	3.0
16	---	---	7.0	6.0					---	---	6.0	4.0
17	---	---	5.5	4.5					---	---	6.5	4.5
18	---	---	4.5	2.5					---	---	6.5	4.0
19	---	---	3.0	2.0					---	---	6.5	5.0
20	8.0	7.5	2.0	1.0					---	---	6.5	5.5
21	8.5	8.0	1.0	.5					---	---	7.5	5.5
22	9.0	8.0	1.5	.0					---	---	7.5	6.5
23	9.5	9.0	2.5	2.0					6.0	5.0	7.0	6.0
24	9.5	8.5	5.0	3.0					6.0	4.5	6.5	6.0
25	9.5	8.5	5.5	4.5					5.0	4.0	7.5	5.5
26	8.5	8.0	---	---					5.0	4.0	7.5	6.0
27	7.5	7.0	---	---					4.5	4.5	8.0	6.5
28	8.0	7.0	---	---					4.5	4.0	8.5	7.0
29	8.0	7.5	---	---					---	---	8.5	7.0
30	8.0	7.0	---	---					---	---	8.0	7.0
31	7.5	7.0	---	---					---	---	7.5	6.0
MONTH	9.5	7.0	8.0	.0					6.0	4.0	8.5	2.0

14138850 BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	6.0	7.0	6.0	12.5	9.5	12.0	11.0	14.5	13.0	---	---
2	6.0	5.5	7.5	7.0	13.0	9.5	11.0	10.0	15.0	13.0	---	---
3	7.0	5.0	7.0	6.0	13.5	10.5	10.5	10.0	15.5	13.5	---	---
4	6.5	5.5	6.5	5.5	14.5	11.0	12.0	10.0	15.5	14.5	---	---
5	5.5	5.0	7.0	5.0	15.0	12.0	---	---	15.0	13.0	11.0	10.0
6	6.0	4.0	8.5	5.0	14.0	12.0	---	---	15.5	13.5	11.0	10.0
7	5.0	4.5	9.0	6.5	14.0	11.5	---	---	16.5	14.0	11.0	10.0
8	6.0	5.0	10.0	6.5	14.0	11.5	---	---	16.5	14.5	10.0	9.0
9	6.5	5.0	9.0	8.5	13.0	10.5	---	---	16.5	15.0	10.0	8.5
10	7.0	6.5	8.5	7.0	10.5	10.0	---	---	16.0	14.0	9.0	8.5
11	8.0	6.5	7.0	6.5	12.0	9.5	---	---	15.0	13.5	9.5	8.5
12	8.0	6.5	7.5	6.5	11.0	9.0	---	---	13.5	12.0	10.0	9.0
13	6.5	4.5	7.5	7.0	10.5	9.5	---	---	13.0	12.0	10.5	10.0
14	6.5	5.0	7.0	6.5	10.0	9.0	---	---	13.0	12.0	10.0	9.5
15	6.0	5.5	7.5	6.0	9.5	8.5	---	---	13.5	12.5	11.0	10.0
16	5.5	5.5	7.5	6.5	10.5	9.0	---	---	12.5	12.0	12.0	10.5
17	---	---	8.0	6.5	12.5	8.5	---	---	12.0	11.5	12.5	11.0
18	7.0	6.0	10.0	6.5	12.0	10.5	---	---	13.0	11.5	12.5	11.5
19	6.5	6.0	11.5	8.0	13.5	10.5	---	---	12.5	11.0	12.0	11.0
20	6.0	5.5	12.0	9.5	14.0	11.0	---	---	12.0	11.5	11.5	11.0
21	5.0	5.0	11.0	8.0	12.5	11.0	---	---	12.0	11.5	11.5	10.5
22	5.5	4.5	8.0	6.5	11.5	10.5	---	---	12.0	11.5	11.0	10.5
23	6.5	4.5	8.5	7.0	11.5	10.5	---	---	12.0	11.0	10.5	9.0
24	7.5	6.0	8.5	7.0	11.0	10.5	---	---	12.0	11.5	10.0	9.0
25	7.5	7.0	8.5	7.0	13.5	10.0	---	---	11.5	10.5	9.5	9.0
26	7.0	6.5	8.5	7.5	14.5	11.0	---	---	12.0	10.0	10.0	9.0
27	6.5	6.0	8.5	3.0	14.5	12.0	---	---	12.5	10.5	9.5	9.5
28	7.0	6.0	8.5	7.0	13.0	12.0	14.5	13.5	13.0	11.0	---	---
29	7.5	6.0	9.0	7.0	13.5	12.0	15.0	12.5	---	---	---	---
30	6.5	6.0	10.0	7.0	13.0	12.0	15.5	13.5	---	---	---	---
31	---	---	11.5	8.0	---	---	15.0	13.5	---	---	---	---
MONTH	8.0	4.0	12.0	5.0	15.0	8.5	15.5	10.0	16.5	10.0	12.5	8.5

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2	1.9	6	31	7	41	2	1.3	3	4.3	1	1.3
2	2	1.5	6	27	290	5930	2	1.2	8	22	1	1.0
3	2	1.3	3	6.2	20	171	2	1.8	3	7.0	2	1.7
4	1	.54	3	3.9	14	70	3	4.2	2	3.4	2	1.5
5	1	.47	3	3.1	8	22	3	4.2	2	3.1	2	1.4
6	1	.50	3	2.6	24	195	4	6.5	3	5.1	1	.62
7	3	4.1	3	4.3	14	70	3	4.3	3	5.0	1	.65
8	3	3.2	3	3.2	6	15	4	7.8	2	3.1	1	.72
9	2	1.6	3	2.7	4	6.7	4	7.2	2	2.7	2	1.3
10	2	1.3	3	2.3	7	21	4	6.4	3	3.3	1	.60
11	1	.56	3	2.0	21	191	3	3.9	2	1.9	1	.59
12	1	.49	2	1.3	20	118	3	5.2	2	1.6	1	.58
13	1	.45	3	4.3	120	2080	3	4.3	2	1.4	1	.59
14	1	.40	12	70	20	170	3	3.7	2	1.3	1	.57
15	1	.35	16	109	13	65	3	3.3	2	1.3	1	.54
16	0	.00	6	17	7	20	2	2.2	2	1.2	1	.54
17	0	.00	3	5.0	5	10	4	6.2	2	1.2	1	.55
18	0	.00	2	2.4	4	6.3	2	3.1	2	1.3	1	.57
19	0	.00	2	1.9	3	3.8	2	2.9	3	2.1	1	.57
20	0	.00	2	1.5	3	3.2	3	4.3	2	1.4	1	.57
21	0	.00	2	1.3	2	1.9	4	6.9	2	1.5	2	1.1
22	0	.00	2	1.3	2	1.7	4	6.9	2	1.4	2	1.1
23	0	.00	6	8.2	2	1.8	3	3.8	2	1.4	2	1.6
24	1	.42	9	35	4	6.8	3	3.1	1	.76	2	1.7
25	2	1.4	93	1410	5	10	2	1.9	4	4.4	2	1.7
26	2	1.5	22	182	4	5.9	3	3.2	4	9.7	2	1.5
27	1	.57	11	48	3	3.5	2	1.8	2	4.1	2	1.4
28	1	.50	10	42	2	2.0	2	1.8	1	1.6	2	1.3
29	2	1.7	18	126	2	1.8	2	1.7	---	---	2	1.3
30	3	7.5	7	20	2	1.7	2	1.6	---	---	2	1.3
31	3	8.5	---	---	2	1.5	3	2.6	---	---	1	.58
TOTAL	---	40.75	---	2174.5	---	9247.6	---	119.3	---	98.56	---	31.04

14138850 BULL RUN RIVER NEAR MULTNOMAH FALLS, OR—Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1	.55	3	2.6	1	.58	1	.31	0	.00	1	.38
2	2	1.2	3	2.2	1	.53	1	.30	0	.00	1	.35
3	1	.63	3	2.0	1	.49	1	.31	0	.00	1	.32
4	1	.65	3	2.0	3	1.4	1	.31	0	.00	1	.35
5	1	.80	3	1.9	3	1.3	1	.30	0	.00	1	.41
6	2	1.5	3	1.8	3	1.2	1	.28	0	.00	1	.38
7	2	1.3	3	1.6	2	.73	1	.27	0	.00	1	.35
8	2	1.2	3	1.5	2	.69	0	.00	0	.00	1	.35
9	2	1.1	3	1.5	3	1.4	0	.00	0	.00	1	.54
10	2	1.1	3	1.6	2	1.4	0	.00	0	.00	2	1.6
11	2	1.1	3	3.0	2	1.8	0	.00	1	.14	3	4.2
12	2	.98	2	1.8	3	1.9	0	.00	1	.27	3	3.2
13	2	.96	3	4.4	4	2.5	0	.00	1	.41	2	1.4
14	2	.97	6	17	5	3.6	0	.00	0	.00	2	1.3
15	2	1.0	2	4.6	5	5.0	1	.27	2	1.4	1	.59
16	2	1.2	2	3.3	5	4.1	1	.49	2	1.5	1	.53
17	2	1.3	2	2.5	4	2.8	1	.41	1	.59	2	1.4
18	2	1.4	1	1.0	2	1.2	1	.35	1	.49	3	3.3
19	2	1.5	1	.85	2	1.2	1	.32	1	.43	2	1.6
20	2	1.6	1	.73	2	1.0	1	.30	1	.57	2	1.3
21	2	2.0	1	.66	2	.93	0	.00	1	.65	2	1.2
22	2	2.8	1	.63	2	.88	0	.00	1	.59	1	.56
23	3	3.8	1	.58	2	.83	0	.00	2	1.2	1	.54
24	2	2.1	1	.60	3	1.2	0	.00	2	1.6	1	.47
25	3	3.3	2	1.2	3	1.3	0	.00	2	1.7	1	.42
26	2	3.9	2	1.2	3	1.2	0	.00	2	1.4	1	.38
27	3	7.1	2	1.9	3	1.1	0	.00	1	.59	1	.37
28	2	3.9	1	.99	3	1.0	0	.00	1	.51	1	.34
29	2	2.8	2	1.6	3	.98	0	.00	1	.46	0	.00
30	2	2.1	2	1.4	2	.64	0	.00	1	.41	0	.00
31	---	---	1	.63	---	---	0	.00	1	.41	---	---
TOTAL	---	55.84	---	69.27	---	4 .88	---	4.22	---	15.32	---	28.13

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
14...	1100	2810	11	83	36
15...	1130	2870	17	132	23
16...	1200	1040	6	17	33
23...	1500	475	6	7.7	50
24...	1600	1010	6	16	50
25...	1430	5390	170	2470	29
25...	1600	5970	168	2710	27
26...	0100	4460	48	578	40
29...	0830	3190	29	250	41
DEC					
06...	1300	2860	21	162	43
13...	1200	6620	202	3610	32

14138850 BULL RUN RIVER NEAR MULTNOMAH FALLS, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	OXYGEN, DIS-SOLVED (MG/L)	PH (UNITS)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)
OCT									
02...	1100	280	8.0	19	11.9	7.1	16	1	1
08...	1230	383	9.1	17	11.4	7.2	2	0	1
15...	1030	114	8.4	20	11.7	7.2	98	1	0
22...	1230	83	8.0	21	11.8	7.4	10	1	<1
29...	1230	312	8.0	19	12.0	7.2	4	1	2
NOV									
05...	0915	383	6.0	18	12.4	7.1	98	<1	<1
12...	0930	234	6.8	19	12.6	7.2	2	<1	<1
19...	1000	351	2.0	17	14.0	7.0	57	<1	<1
25...	1500	5570	5.0	11	--	6.7	--	--	--
26...	1130	2510	6.0	13	12.0	6.7	8	1	1
DEC									
02...	1000	7980	--	--	--	--	--	--	--
03...	1000	2700	6.5	13	--	6.8	4	<1	1
10...	1015	1250	4.5	14	12.4	7.0	5	4	0
14...	1100	3690	7.0	11	--	6.8	--	--	--
17...	1030	727	4.0	15	13.0	7.1	<1	4	<1
24...	1015	587	3.9	15	13.2	7.1	12	3	<1
31...	1000	275	2.1	17	13.4	7.2	7	1	<1
JAN									
07...	1030	445	3.4	15	12.9	7.0	1	<1	<1
14...	1000	449	3.8	15	13.6	7.0	<1	1	<1
21...	0930	661	4.8	15	13.2	7.1	<1	1	0
28...	0930	306	4.0	16	13.4	7.1	<1	<1	<1
FEB									
04...	0930	626	4.0	14	13.4	7.1	1	0	<1
11...	0930	339	3.0	15	13.0	7.1	<1	0	<1
18...	0930	234	3.8	17	13.2	7.1	<1	<1	<1
25...	0930	326	3.6	17	13.5	7.1	1	0	<1
MAR									
04...	0945	--	2.0	16	13.7	7.1	<1	0	<1
11...	1000	214	3.8	16	13.4	7.2	5	2	<1
18...	0930	207	4.0	17	13.0	7.2	14	0	<1
25...	1015	315	5.5	16	12.9	7.2	<1	<1	<1
APR									
01...	0930	203	6.0	18	12.6	7.2	<1	0	<1
08...	0930	227	5.0	17	12.6	7.1	<1	<1	<1
15...	0930	179	5.5	18	12.9	7.2	<1	<1	<1
22...	1145	517	5.5	16	12.2	7.0	13	<1	0
MAY									
01...	1020	525	6.0	17	--	7.1	16	0	<1
08...	0835	197	6.5	18	12.4	7.1	6	0	0
15...	0835	908	5.8	14	--	7.1	25	5	1
22...	0835	229	6.5	18	--	7.2	11	<1	<1
28...	0835	380	7.0	17	--	7.1	3	1	<1
JUN									
04...	0925	173	11.0	21	11.9	7.1	41	6	5
JUN									
12...	0805	243	9.2	18	11.1	7.1	25	9	5
19...	0835	220	10.5	19	11.6	7.2	18	9	2
26...	0835	149	11.0	21	--	7.2	17	5	1
JUL									
03...	0850	111	10.2	24	12.4	7.3	37	29	4
10...	0830	91	10.0	22	--	7.3	23	5	2
17...	0830	--	11.0	23	11.9	7.3	20	10	8
22...	0900	--	13.0	24	10.4	7.3	7	18	4
29...	0915	--	12.5	25	10.0	7.3	9	4	5
AUG									
05...	0915	539	13.2	26	--	7.3	6	3	4
12...	1025	53	12.2	27	10.4	7.3	50	90	54
19...	1010	51	11.2	22	10.6	7.2	72	24	3
26...	0950	292	9.0	20	13.0	7.2	8	11	<1
SEP									
02...	0950	129	11.8	23	13.0	7.3	8	3	<1
09...	0955	191	10.0	22	10.8	7.2	8	7	4
16...	1015	199	10.5	21	10.5	7.3	12	11	1
23...	1015	191	9.0	21	11.9	7.2	6	1	1
30...	0930	108	11.4	24	10.8	7.2	2	0	17

14138850 BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TUR-BID-ITY (NTU)	COLOR (PLAT-INUM-COBALT UNITS)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)
OCT								
02...	.11	<5	9.7	<.02	.04	.00	--	--
08...	.13	<5	8.9	<.02	.04	.00	--	--
15...	.13	<5	10	<.02	.03	.00	--	--
22...	.10	<5	11	<.02	.02	.00	--	--
29...	.18	5	9.3	<.02	.05	.00	--	--
NOV								
05...	.16	<5	9.4	<.02	.05	.00	--	--
12...	.12	<5	10	<.02	.05	.00	--	--
19...	.15	<5	9.2	<.02	.05	.00	--	--
25...	15	30	5.2	<.02	.05	.00	--	--
26...	2.7	10	6.8	<.02	.03	.00	--	--
DEC								
02...	43	--	--	--	--	--	--	--
03...	3.0	10	7.1	<.02	.04	.00	--	--
10...	.54	<5	7.3	<.02	.04	.00	--	--
14...	3.1	15	6.3	<.02	.02	.00	--	--
17...	.30	<5	8.9	<.02	.03	<.00	--	--
24...	.26	<5	8.4	<.02	.05	.00	--	--
31...	.17	<5	9.7	<.02	.04	<.00	--	--
JAN								
07...	.24	<5	8.5	<.02	.04	<.00	--	--
14...	.27	<5	8.1	<.02	.04	<.00	--	--
21...	.24	<5	8.3	<.02	.04	<.00	--	--
28...	.23	<5	9.1	<.02	.03	<.00	--	--
FEB								
04...	.29	<5	7.7	<.02	.03	.00	--	--
11...	.24	<5	8.5	<.02	.02	<.00	--	--
18...	.18	<5	9.8	<.02	.02	<.00	--	--
25...	.16	<5	9.2	<.02	.03	<.00	--	--
MAR								
04...	.20	<5	9.1	<.02	.03	<.00	--	--
11...	.18	<5	9.4	<.02	.03	<.00	--	--
18...	.28	<5	9.4	<.02	.03	<.00	--	--
25...	.20	<5	8.7	<.02	.03	.01	--	--
APR								
01...	.26	<5	9.2	<.02	.03	.02	--	--
08...	.16	<5	9.2	<.02	.02	<.00	--	--
15...	.12	<5	9.7	<.02	.02	<.00	--	--
22...	.23	<5	8.2	<.02	.04	<.00	19	26.8
MAY								
01...	.14	<5	8.4	<.02	.03	<.00	20	28.3
08...	.12	<5	9.6	<.02	.02	<.00	21	11.5
15...	.28	<5	7.7	<.02	.04	<.00	19	48.8
22...	.11	<5	8.9	<.02	.02	<.00	19	11.9
28...	.17	<5	8.3	<.02	.04	<.00	22	22.8
JUN								
04...	.13	<5	10	<.02	.02	<.00	19	9.11
JUN								
12...	.14	<5	--	--	--	--	21	14.0
19...	.13	<5	--	<.02	.02	--	24	14.4
26...	.13	<5	--	--	--	--	23	9.45
JUL								
03...	.12	<5	10	<.02	.03	<.00	26	7.82
10...	.12	<5	--	--	--	--	23	5.79
17...	.13	<5	--	<.02	.03	--	21	--
22...	.12	<5	--	--	--	--	22	--
29...	.11	<5	11	<.02	.02	<.00	26	--
AUG								
05...	.12	<5	--	--	--	--	32	46.7
12...	.13	<5	--	<.02	.04	--	24	3.62
19...	.11	<5	--	--	--	--	--	--
26...	.11	<5	--	--	--	--	20	16.4
SEP								
02...	.13	<5	10	<.02	.03	<.00	24	8.57
09...	.12	<5	--	--	--	--	24	12.5
16...	.14	<5	--	<.02	.05	--	23	12.8
23...	.10	<5	--	--	--	--	26	13.6
30...	.17	<5	10	<.02	.04	.00	24	7.00

14138870 FIR CREEK NEAR BRIGHTWOOD, OR

LOCATION.--Lat 45°28'56", long 122°01'36", in NE¼SE¼ sec.14, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, on right bank, 6.4 mi (10.3 km) north of Brightwood and 0.6 mi (1.0 km) above Bull Run Reservoir Number One.

DRAINAGE AREA.--5.46 mi^2 (14.1 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,440 ft (439 m), from topographic map.

REMARKS.--Water-discharge records fair. No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,050 ft^3/s (29.7 m^3/s) Dec. 2, 1977, gage height, 5.64 ft (1.719 m); minimum, 1.9 ft^3/s (0.054 m^3/s) Aug. 17-23, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft^3/s (11.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2200	753	21.3	5.20	1.585	Dec. 13	0900	673	19.1	5.06	1.542
Dec. 2	1500	*1,050	29.7	*5.64	1.719						

Minimum, 3.5 ft^3/s (0.10 m^3/s) Aug. 10, 11.

REVISIONS.--The peak discharges and annual maximum (*) for water year 1976 and daily discharge for Dec. 1, 1975, have been revised as shown in the following table. They supersede figures published in WDR OR-76-1.

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 1, 1975	0930	*553	15.7	*4.81	1.466	Dec. 7, 1975	0900	515	14.6	4.72	1.439
Dec. 4, 1975	0500	503	14.2	4.69	1.430	Jan. 14, 1976	1800	464	13.1	4.54	1.384

Dec. 1, 1975 .... 495 ft^3/s

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	49	495	49	25	31	38	90	49	9.1	5.6	6.6
2	5.0	63	300	39	24	26	31	118	46	8.5	5.4	6.2
3	10	71	212	33	23	23	30	86	36	8.0	5.4	6.0
4	40	50	344	202	20	21	34	69	29	8.3	5.2	5.8
5	25	42	127	181	18	19	42	78	25	7.8	5.2	5.8
6	26	55	131	88	17	18	49	65	23	7.3	5.6	7.1
7	24	67	458	185	16	18	52	64	22	6.6	16	6.0
8	27	54	161	269	16	17	61	71	21	16	17	5.4
9	32	45	96	125	15	18	60	72	20	9.3	11	5.2
10	24	38	69	82	14	21	56	73	19	8.0	9.1	5.0
11	20	31	54	117	17	23	64	68	22	7.3	8.0	4.8
12	17	28	42	82	56	21	54	54	47	7.5	7.5	6.0
13	19	28	35	65	54	24	44	55	38	6.8	7.8	5.2
14	18	76	28	368	44	39	40	48	28	6.6	12	8.5
15	28	152	34	269	39	40	40	41	27	6.0	18	7.1
16	22	84	53	159	185	40	34	40	66	5.8	17	5.8
17	22	53	45	113	152	55	36	35	52	7.5	19	6.2
18	30	39	37	86	109	55	42	30	38	7.1	20	5.8
19	48	31	30	65	69	42	42	30	29	7.1	16	5.4
20	40	26	27	52	53	42	167	31	23	6.6	14	5.0
21	79	23	24	42	42	45	99	27	21	6.2	12	4.6
22	69	27	25	39	39	60	67	26	18	5.8	11	4.8
23	52	55	67	39	45	56	54	24	16	5.4	9.9	4.6
24	40	57	133	32	47	101	85	26	16	5.4	9.3	4.5
25	125	49	99	28	42	71	76	27	14	4.8	11	4.3
26	106	117	223	26	42	51	60	25	12	4.5	10	4.1
27	65	100	118	41	66	40	56	28	11	6.2	8.8	4.0
28	54	60	79	38	61	37	56	26	10	6.0	8.0	4.0
29	52	43	99	34	42	31	62	27	9.9	5.8	7.5	3.8
30	80	292	93	29	---	35	75	46	9.3	5.8	7.1	3.6
31	63	---	66	26	---	45	---	50	---	5.8	6.8	---
TOTAL	1267.0	1905	3804	3003	1392	1165	1706	1550	797.2	218.9	326.2	161.2
MEAN	40.9	63.5	123	96.9	48.0	37.6	56.9	50.0	26.6	7.06	10.5	5.37
MAX	125	292	495	368	185	101	167	118	66	16	20	8.5
MIN	5.0	23	24	26	14	17	30	24	9.3	4.5	5.2	3.6
CFSM	7.49	11.6	22.5	17.7	8.79	6.89	10.4	9.16	4.87	1.29	1.92	.98
IN.	8.63	12.98	25.91	20.46	9.48	7.94	11.62	10.56	5.43	1.49	2.22	1.10
AC-FT	2510	3780	7550	5960	2760	2310	3380	3070	1580	434	647	320

WTR YR 1976 TOTAL 17295.5 MEAN 47.3 MAX 495 MIN 3.6 CFSM 8.66 IN 117.82 AC-FT 34310

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	118	127	24	51	32	15	27	16	8.2	4.4	11
2	28	112	616	23	103	27	17	23	15	8.2	4.3	10
3	23	63	292	31	81	25	19	21	14	8.8	4.1	9.6
4	19	41	189	43	59	23	21	20	13	9.4	4.0	10
5	16	31	100	43	52	21	25	20	11	8.4	3.9	13
6	17	25	250	48	52	20	24	18	11	8.0	3.8	12
7	42	38	175	49	52	22	22	17	9.8	7.6	3.7	11
8	33	28	85	72	49	26	21	16	9.4	7.3	3.6	11
9	27	24	55	64	45	22	19	15	13	6.9	3.5	15
10	23	20	96	57	36	20	18	16	22	6.8	3.5	21
11	19	18	257	45	31	20	17	27	24	6.6	3.5	28
12	17	16	187	52	28	19	16	25	18	6.3	5.5	23
13	16	35	471	44	25	20	15	40	18	6.0	7.8	22
14	14	85	274	40	24	19	16	98	19	5.8	4.8	20
15	13	138	179	34	23	18	16	78	29	6.3	20	19
16	12	79	115	36	21	19	18	52	23	16	28	17
17	11	49	80	52	22	20	20	39	20	11	22	36
18	10	36	60	53	25	20	25	30	18	9.0	17	67
19	9.9	27	48	59	26	19	25	25	17	8.2	17	37
20	9.3	21	39	55	27	18	27	22	15	7.5	22	27
21	8.8	18	33	61	26	17	30	20	13	6.9	22	22
22	8.5	18	29	61	25	17	43	18	13	6.5	21	20
23	10	39	30	48	24	23	44	17	12	6.2	21	18
24	16	112	58	38	25	24	36	17	11	5.9	29	16
25	22	549	66	35	41	23	35	17	12	5.6	27	15
26	25	266	50	38	90	21	76	17	11	5.8	23	13
27	19	144	39	32	51	20	96	26	9.8	5.5	19	12
28	17	133	32	32	40	18	73	27	9.2	5.1	16	11
29	28	185	30	30	---	17	48	23	8.8	5.0	14	11
30	71	103	29	28	---	18	35	20	8.8	4.8	13	10
31	85	---	27	30	---	17	---	18	---	4.5	13	---
TOTAL	706.5	2571	4118	1357	1154	645	912	849	443.8	224.1	404.4	567.6
MEAN	22.8	85.7	133	43.8	41.2	20.8	30.4	27.4	14.8	7.23	13.0	18.9
MAX	85	549	616	72	103	32	96	98	29	16	29	67
MIN	8.5	16	27	23	21	17	15	15	8.8	4.5	3.5	9.6
CFSM	4.18	15.7	24.4	8.02	7.55	3.81	5.57	5.02	2.71	1.32	2.38	3.46
IN.	4.81	17.51	28.05	9.24	7.86	4.39	6.21	5.78	3.02	1.53	2.75	3.87
AC-FT	1400	5100	8170	2690	2290	1280	1810	1680	880	445	802	1130

CAL YR 1977 TOTAL 14939.2 MEAN 40.9 MAX 616 MIN 1.9 CFSM 7.49 IN 101.76 AC-FT 29630
WTR YR 1978 TOTAL 13952.4 MEAN 38.2 MAX 616 MIN 3.5 CFSM 7.00 IN 95.04 AC-FT 27670

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1977 to current year.
WATER TEMPERATURES: October 1977 to current year.
SUSPENDED SEDIMENT DISCHARGE: October 1977 to current year.

INSTRUMENTATION.--Conductivity/temperature recorder since October 1977. Automatic pumping sediment sampler since October 1977.

COOPERATION.--Chemical data were analyzed by the City of Portland Water Quality Laboratory and were reviewed by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 27 micromhos Aug. 8, 9; minimum recorded, 12 micromhos May 14.
WATER TEMPERATURES: Maximum recorded, 15.0°C Aug. 8, 9; minimum recorded, 1.5°C Nov. 22.
SEDIMENT CONCENTRATIONS: Maximum, 133 mg/l Dec. 2; minimum, 0 mg/l many days throughout the year.
SEDIMENT DISCHARGE: Maximum, 345 tons (313 tonnes) Dec. 2; minimum, 0 tons (0 tonnes) many days throughout the year.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	19	---	---	20	17	19	20	22	24	25	21
2	---	19	---	---	15	17	19	20	23	24	26	21
3	---	20	---	18	16	18	19	20	23	24	26	21
4	---	21	---	19	17	18	19	20	24	24	25	21
5	---	20	---	19	18	19	18	21	24	24	25	19
6	---	21	---	17	18	19	18	21	25	24	26	19
7	---	20	---	18	20	19	18	21	23	24	26	21
8	---	20	---	17	20	19	18	21	23	24	26	19
9	---	21	---	17	20	19	18	21	22	24	26	19
10	---	20	---	18	19	18	18	21	21	24	26	23
11	---	21	---	17	19	18	18	20	20	24	26	22
12	---	20	---	18	20	19	17	19	21	24	23	21
13	---	20	---	19	19	18	17	17	20	25	24	21
14	---	18	---	17	19	18	18	13	20	25	23	22
15	---	16	---	18	19	18	18	14	19	25	22	22
16	---	17	17	19	19	18	18	15	20	24	21	21
17	---	17	18	17	19	18	18	17	20	24	18	17
18	---	18	20	17	19	18	17	18	21	24	20	17
19	---	18	21	15	19	18	18	18	21	24	18	18
20	---	19	22	16	19	18	18	19	21	24	18	19
21	---	19	---	15	19	18	18	20	22	25	18	19
22	---	21	---	15	19	18	18	21	22	25	18	20
23	---	19	16	16	18	18	17	21	22	25	21	20
24	---	17	16	17	18	18	18	21	22	25	19	20
25	---	14	16	17	18	18	18	21	22	25	18	20
26	24	15	17	17	17	18	16	22	23	26	18	20
27	24	---	19	17	19	18	15	22	23	25	18	21
28	24	---	---	17	19	18	16	21	23	25	18	21
29	23	---	---	17	---	18	18	21	23	26	19	21
30	21	---	---	17	---	18	19	22	23	26	19	22
31	20	---	---	17	---	18	---	22	---	26	21	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	8.0	7.0	7.5	7.0	---	---	5.0	4.5	4.5	4.0
2	---	---	7.5	6.5	8.0	7.0	---	---	5.0	5.0	4.0	3.5
3	---	---	6.5	6.0	7.0	6.0	---	---	5.5	5.0	4.0	3.5
4	---	---	6.5	6.0	7.0	6.5	4.0	3.5	6.0	5.0	4.0	3.0
5	---	---	7.0	6.5	7.0	6.5	4.5	4.5	6.0	5.5	4.5	3.5
6	---	---	7.0	6.5	---	---	4.5	4.0	5.5	5.0	5.0	4.5
7	---	---	7.0	6.0	---	---	5.0	4.5	5.5	5.0	5.5	5.0
8	---	---	6.0	5.0	---	---	5.0	4.0	5.5	5.0	6.0	5.0
9	---	---	6.5	5.5	---	---	5.0	5.0	5.5	4.5	5.5	5.0
10	---	---	7.0	6.5	---	---	5.0	5.0	4.5	4.0	5.0	4.5
11	---	---	7.0	7.0	---	---	5.0	5.0	4.0	3.5	4.5	3.5
12	---	---	7.0	6.5	---	---	5.0	5.0	4.0	3.5	5.0	4.5
13	---	---	7.0	6.5	---	---	5.0	4.5	4.5	3.5	4.5	4.0
14	---	---	7.0	6.0	---	---	5.0	5.0	4.5	4.0	4.5	4.0
15	---	---	7.5	6.5	---	---	5.0	4.5	4.0	4.0	5.0	4.0
16	---	---	7.0	6.0	6.0	6.0	5.5	5.0	4.5	4.0	5.0	4.5
17	---	---	6.0	5.0	6.0	5.0	5.0	5.0	5.0	4.0	5.5	5.0
18	---	---	5.0	3.5	5.0	5.0	5.0	5.0	5.0	4.0	6.0	5.0
19	---	---	4.0	3.5	5.0	4.5	5.5	5.0	5.0	4.5	6.0	5.0
20	---	---	3.5	2.5	4.5	4.0	5.5	5.0	5.0	4.5	6.5	5.5
21	---	---	2.5	2.0	---	---	5.5	4.0	5.0	5.0	6.5	5.5
22	---	---	3.5	1.5	---	---	4.5	3.5	5.0	4.5	6.5	6.0
23	---	---	4.0	3.5	---	---	4.5	4.5	5.5	5.0	6.5	6.0
24	---	---	5.5	4.5	5.0	5.0	4.5	4.0	5.5	5.0	6.0	6.0
25	---	---	6.0	5.0	5.0	5.0	5.0	4.5	5.0	4.5	7.0	6.0
26	8.0	7.5	7.0	6.0	4.5	3.5	5.0	4.5	5.0	4.5	7.0	6.0
27	7.5	7.0	6.5	6.5	3.5	3.0	5.0	4.5	5.0	4.5	7.5	6.5
28	7.5	7.0	6.5	6.5	---	---	5.0	5.0	5.0	4.5	7.5	6.5
29	8.0	7.5	7.0	6.5	---	---	5.0	4.5	---	---	7.5	6.5
30	7.5	7.0	7.0	6.5	---	---	4.5	4.0	---	---	7.0	6.5
31	7.5	7.0	---	---	---	---	4.5	4.0	---	---	7.0	6.0
MONTH	8.0	7.0	8.0	1.5	8.0	3.0	5.5	3.5	6.0	3.5	7.5	3.0

14138870 FIR CREEK NEAR BRIGHTWOOD, OR—Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	6.0	6.0	5.0	10.0	8.0	11.0	10.0	13.0	11.5	---	---
2	6.0	5.5	6.5	6.0	11.0	8.5	10.5	9.5	13.0	11.5	---	---
3	6.5	5.0	6.0	5.5	11.0	9.0	9.5	9.0	13.5	12.0	---	---
4	6.0	5.0	5.5	4.5	12.0	9.5	9.0	9.0	13.5	12.5	---	---
5	5.5	5.0	5.5	4.0	12.5	10.5	9.5	9.0	13.5	11.5	---	---
6	5.5	4.5	6.5	4.5	11.5	11.0	11.5	9.5	13.5	12.0	---	---
7	5.5	4.5	7.5	5.5	11.5	10.0	12.0	10.0	14.5	12.5	---	---
8	6.0	5.0	8.0	6.0	12.0	9.5	11.0	10.5	15.0	13.5	---	---
9	6.5	5.0	7.5	7.0	10.5	9.0	10.5	10.0	15.0	13.5	9.5	9.0
10	7.5	6.0	6.5	6.0	9.0	8.5	10.0	9.5	14.5	13.0	9.5	9.0
11	6.5	5.5	6.0	6.0	10.0	8.0	10.0	9.5	13.5	13.0	9.5	8.5
12	6.0	5.0	6.0	5.5	9.0	8.0	11.0	8.5	---	---	9.0	8.5
13	6.0	5.5	6.5	6.0	9.0	8.0	12.5	10.0	---	---	9.0	8.5
14	6.0	5.5	6.5	6.0	8.5	7.5	13.0	11.0	---	---	9.0	8.5
15	6.5	5.5	6.5	5.5	8.0	7.5	12.5	11.5	---	---	9.0	8.0
16	5.5	5.0	6.5	6.0	8.5	7.5	11.5	10.5	---	---	8.5	7.5
17	5.5	5.0	7.0	6.0	9.5	7.0	10.5	10.0	---	---	8.0	7.0
18	6.5	5.0	8.0	6.0	9.5	8.5	10.5	9.5	---	---	8.0	7.5
19	6.5	5.5	9.0	7.0	10.5	8.5	11.5	10.0	---	---	8.5	7.5
20	6.0	5.0	9.5	7.5	11.0	9.0	12.5	10.5	---	---	8.5	8.0
21	5.0	5.0	8.5	7.0	10.0	9.0	13.0	11.0	---	---	9.0	8.0
22	5.0	4.5	7.5	6.5	9.5	8.5	14.0	11.5	---	---	9.5	8.5
23	6.0	5.0	7.0	6.0	9.0	8.5	14.0	12.5	---	---	10.0	9.0
24	7.0	5.5	7.0	6.5	9.0	8.5	14.0	12.0	---	---	10.5	9.0
25	7.0	6.5	7.0	6.5	9.0	8.5	14.0	12.0	---	---	10.5	9.5
26	6.5	5.5	7.0	6.5	10.5	8.5	14.0	13.0	---	---	10.0	9.5
27	5.5	5.0	7.5	7.0	11.5	9.0	13.5	12.0	---	---	9.5	9.0
28	6.0	5.0	7.5	7.0	12.0	10.0	13.0	11.5	---	---	10.0	8.5
29	6.0	5.0	7.5	6.5	11.5	10.5	13.5	11.5	---	---	9.5	8.5
30	6.0	5.5	8.5	6.0	11.0	10.0	13.5	12.0	---	---	9.5	9.0
31	---	---	9.5	7.0	---	---	13.5	11.5	---	---	---	---
MONTH	7.5	4.5	9.5	4.0	12.5	7.0	14.0	8.5	15.0	11.5	10.5	7.0

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTORER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2	.20	5	1.8	5	1.7	0	.00	1	.14	0	.00
2	2	.15	7	2.1	133	345	0	.00	2	.56	0	.00
3	1	.06	2	.34	10	8.7	1	.08	1	.22	0	.00
4	0	.00	2	.22	6	3.2	1	.11	1	.16	1	.06
5	0	.00	1	.08	2	.54	1	.11	1	.14	0	.00
6	0	.00	2	.13	10	7.9	1	.13	0	.00	0	.00
7	3	.34	3	.31	6	2.9	2	.27	1	.14	0	.00
8	2	.18	4	.31	3	.68	3	.58	1	.13	0	.00
9	2	.14	2	.13	2	.30	2	.35	3	.36	0	.00
10	1	.06	2	.11	3	.78	1	.15	2	.20	1	.05
11	0	.00	2	.09	9	7.1	1	.12	2	.17	0	.00
12	0	.00	2	.08	5	2.6	1	.14	1	.07	0	.00
13	0	.00	2	.19	43	64	2	.24	1	.07	0	.00
14	0	.00	4	.92	9	7.6	1	.11	0	.00	1	.05
15	0	.00	4	1.5	3	1.6	1	.09	1	.06	0	.00
16	0	.00	2	.43	2	.62	2	.19	0	.00	0	.00
17	0	.00	2	.27	1	.22	2	.28	0	.00	0	.00
18	0	.00	2	.19	1	.16	1	.14	0	.00	1	.05
19	0	.00	1	.07	1	.13	2	.32	0	.00	1	.05
20	0	.00	1	.06	1	.11	2	.30	0	.00	0	.00
21	0	.00	1	.05	1	.09	2	.33	0	.00	0	.00
22	0	.00	1	.05	1	.08	1	.17	1	.07	1	.05
23	1	.03	2	.21	1	.08	1	.13	0	.00	0	.00
24	2	.08	4	1.2	2	.31	1	.10	0	.00	1	.07
25	3	.18	46	87	2	.36	1	.09	0	.00	1	.06
26	3	.20	16	22	1	.14	1	.10	1	.24	1	.06
27	2	.10	4	1.6	1	.11	1	.09	1	.14	1	.05
28	2	.09	5	1.8	0	.00	0	.00	0	.00	1	.05
29	3	.23	8	4.5	0	.00	1	.08	---	---	2	.09
30	3	.57	4	1.1	0	.00	1	.07	---	---	1	.05
31	2	.46	---	---	0	.00	0	.00	---	---	2	.09
TOTAL	---	3.07	---	128.84	---	457.01	---	4.87	---	2.87	---	0.83

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	0	.00	1	.07	1	.04	2	.04	1	.01	2	.06
2	0	.00	1	.06	1	.04	2	.04	1	.01	2	.05
3	0	.00	0	.00	1	.04	2	.05	1	.01	2	.05
4	0	.00	0	.00	1	.03	2	.05	1	.01	2	.05
5	0	.00	0	.00	1	.03	2	.05	1	.01	2	.07
6	0	.00	0	.00	2	.06	3	.06	1	.01	2	.06
7	0	.00	0	.00	2	.05	2	.04	2	.02	2	.06
8	0	.00	0	.00	2	.05	1	.02	1	.01	2	.06
9	0	.00	0	.00	2	.07	1	.02	1	.01	1	.04
10	0	.00	1	.04	3	.17	1	.02	1	.01	3	.17
11	1	.05	1	.07	2	.13	1	.02	1	.01	2	.15
12	1	.04	1	.07	1	.05	1	.02	1	.01	1	.06
13	1	.04	0	.00	1	.05	1	.02	2	.04	0	.00
14	0	.00	0	.00	1	.05	1	.02	2	.03	0	.00
15	0	.00	1	.21	1	.08	1	.02	3	.16	0	.00
16	0	.00	1	.14	1	.06	0	.00	2	.15	0	.00
17	0	.00	1	.11	1	.05	1	.03	2	.12	1	.10
18	0	.00	0	.00	1	.05	1	.02	2	.09	0	.00
19	0	.00	0	.00	1	.05	1	.02	1	.05	0	.00
20	0	.00	0	.00	1	.04	1	.02	2	.12	0	.00
21	1	.08	0	.00	1	.04	2	.04	1	.06	0	.00
22	1	.12	0	.00	1	.03	3	.05	2	.11	0	.00
23	0	.00	0	.00	1	.03	2	.03	2	.11	0	.00
24	1	.10	0	.00	1	.03	1	.02	1	.08	0	.00
25	1	.09	1	.05	1	.03	1	.02	2	.15	0	.00
26	3	.62	1	.05	2	.06	1	.02	2	.12	1	.04
27	1	.26	1	.07	2	.05	1	.01	2	.10	0	.00
28	2	.39	1	.07	2	.05	1	.01	2	.09	0	.00
29	2	.26	1	.06	2	.05	1	.01	2	.08	0	.00
30	1	.10	1	.05	2	.05	1	.01	2	.07	0	.00
31	---	---	1	.05	---	---	1	.01	2	.07	---	---
TOTAL	---	2.15	---	1.17	---	1.61	---	0.81	---	1.9	---	1.02

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TUR-BID-ITY (NTU)	COLOR (PLAT-INUM-COBALT UNITS)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)
OCT								
01...	.12	<5	8.6	<.02	.05	<.00	--	--
08...	.11	<5	8.8	<.02	.05	.00	--	--
15...	.11	<5	10	<.02	.03	.00	--	--
22...	.09	<5	11	<.02	.03	.01	--	--
29...	.12	<5	9.1	<.02	.07	.00	--	--
NOV								
05...	.11	<5	8.8	<.02	.04	.00	--	--
12...	.11	<5	9.8	<.02	.04	.01	--	--
14...	.41	25	--	--	--	--	--	--
20...	.10	<5	9.2	<.02	.04	.00	--	--
25...	4.3	20	5.1	<.02	.05	.02	--	--
26...	1.0	5	7.6	<.02	.03	.00	--	--
DEC								
02...	8.4	--	--	--	--	--	--	--
03...	1.0	10	7.0	<.02	.03	.00	--	--
10...	.25	<5	7.4	<.02	.03	.00	--	--
13...	7.0	40	4.8	<.02	.04	.00	--	--
14...	.98	10	6.3	<.02	.02	<.00	--	--
17...	.21	<5	9.0	<.02	.02	.00	--	--
26...	.14	<5	8.2	<.02	.03	.01	--	--
JAN								
01...	.09	<5	9.9	<.02	.04	.00	--	--
08...	.24	<5	7.8	<.02	.06	.00	--	--
15...	.12	<5	8.6	<.02	.05	.00	--	--
21...	.15	<5	7.6	<.02	.05	<.00	--	--
28...	.09	<5	8.9	<.02	.03	<.00	--	--
FEB								
04...	.12	<5	7.9	<.02	.03	.04	--	--
11...	.17	<5	8.8	<.02	.01	.00	--	--
18...	.14	<5	9.4	<.02	.03	.00	--	--
25...	.16	<5	8.3	<.02	.04	<.00	--	--
MAR								
04...	.12	<5	9.2	<.02	.03	.00	--	--
11...	.12	<5	9.3	<.02	.02	<.00	--	--
18...	.11	<5	9.5	<.02	.03	<.00	--	--
25...	.14	<5	8.5	<.02	.04	<.00	--	--
APR								
01...	.12	<5	9.7	<.02	.02	<.00	--	--
08...	.11	<5	8.9	<.02	.02	<.00	--	--
15...	.09	<5	9.5	<.02	.02	.00	--	--
22...	.13	<5	8.0	<.02	.03	<.00	--	--
MAY								
01...	.11	<5	8.5	<.02	.03	<.00	19	2.30
08...	.10	<5	9.3	<.02	.02	.00	21	.86
15...	.15	<5	7.1	<.02	.03	<.00	18	3.48
22...	.10	<5	8.7	<.02	.02	.00	20	.89

14138870 FIR CREEK NEAR BRIGHTWOOD, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)	SILICA, DIS- SOLVED (MG/L AS SIO2)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
MAY								
28...	.12	<5	7.9	<.02	.02	.00	20	1.49
JUN								
04...	.10	<5	9.4	<.02	.02	<.00	20	.63
12...	.09	<5	--	--	--	--	20	1.04
26...	.08	<5	--	--	--	--	22	.61
JUL								
03...	.12	<5	10	<.02	.04	<.00	24	.52
10...	.09	<5	--	--	--	--	20	.34
17...	.09	<5	--	<.02	.04	--	--	--
22...	.10	<5	--	--	--	--	22	.38
29...	.08	<5	10	<.02	.01	.00	24	.30
AUG								
05...	.09	<5	--	--	--	--	28	.28
12...	.15	<5	--	<.02	.06	--	24	.38
19...	.12	5	--	--	--	--	22	.98
26...	.10	<5	--	--	--	--	22	1.24
SEP								
02...	.11	<5	9.8	<.02	.03	<.00	24	.60
10...	.20	<5	--	--	--	--	23	1.02
17...	.12	<5	--	<.02	.06	--	22	1.20
24...	.11	<5	--	--	--	--	24	.98
30...	.13	<5	10	<.02	.05	<.00	23	.67

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	OXYGEN, DIS- SOLVED (MG/L)	PH (UNITS)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, COLS. PER 100 ML)
OCT									
01...	0945	37	8.0	19	11.3	7.1	8	2	16
08...	0930	32	8.1	18	11.3	7.1	10	2	4
15...	1235	12	8.5	20	11.4	7.2	66	0	2
22...	0945	7.7	7.4	21	11.7	7.2	20	<1	<1
29...	1010	26	8.2	20	11.4	7.1	14	0	0
NOV									
05...	1200	28	6.7	19	11.4	7.1	22	0	0
12...	1230	13	7.0	19	11.6	7.1	<1	0	<1
14...	1345	122	6.0	16	--	6.9	--	--	--
20...	1030	20	2.5	18	--	7.0	8	1	<1
25...	1200	700	5.0	12	--	6.9	--	--	--
26...	1400	197	6.2	13	11.6	6.8	20	3	1
DEC									
02...	1125	853	7.0	--	--	--	--	--	--
03...	1400	272	6.2	15	--	6.9	31	3	<1
10...	1310	190	5.0	16	12.3	7.0	1	0	<1
13...	1105	714	7.0	11	--	6.7	--	--	--
14...	1115	361	6.8	13	--	6.9	--	--	--
17...	1400	64	5.0	16	12.2	7.1	2	1	<1
26...	1030	41	3.5	17	12.7	7.1	6	0	<1
JAN									
01...	1115	19	2.1	18	12.4	7.0	5	<1	<1
08...	1000	64	4.1	16	12.5	7.0	13	2	<1
15...	0915	28	4.4	18	12.8	7.1	2	0	0
21...	1220	57	4.9	15	12.8	7.1	1	0	<1
28...	1250	24	4.7	17	12.7	7.2	<1	<1	<1
FEB									
04...	1230	47	4.8	16	12.4	7.2	<1	<1	<1
11...	1300	24	3.6	17	12.4	7.2	<1	<1	<1
18...	1240	20	4.2	18	12.7	7.2	<1	<1	<1
25...	1230	30	4.5	17	12.3	7.1	1	0	<1
MAR									
04...	1315	20	3.0	17	12.5	7.2	<1	<1	<1
11...	1300	18	3.4	17	12.8	7.2	<1	0	0
18...	1255	17	4.9	18	12.2	7.2	7	0	<1
25...	1250	19	6.1	17	12.0	7.2	<1	<1	<1
APR									
01...	1250	12	6.0	19	11.8	7.2	<1	<1	<1
08...	1215	17	5.0	17	12.0	7.1	<1	<1	<1
15...	1310	12	6.0	18	12.0	7.2	<1	<1	<1
22...	0830	34	4.5	17	11.6	7.0	1	<1	0
MAY									
01...	0815	43	5.2	17	--	7.1	3	0	<1
08...	1120	15	7.0	18	11.7	7.2	5	0	1
15...	1135	70	6.0	15	--	7.0	11	2	0
22...	1150	16	7.0	17	--	7.2	14	<1	0

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	OXYGEN, DIS-SOLVED (MG/L)	PH (UNITS)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)
MAY									
26...	1220	26	7.0	17	11.4	7.1	<1	<1	<1
JUN									
04...	1305	11	11.2	21	10.4	7.1	69	<1	4
12...	1215	18	8.2	19	10.6	7.1	22	1	3
26...	1135	9.8	9.0	22	11.2	7.2	21	0	0
JUL									
03...	1210	7.8	9.2	22	11.2	7.2	8	1	5
10...	1215	6.1	9.3	22	10.3	7.3	12	3	2
17...	1130	60	10.2	22	10.3	7.2	--	--	--
22...	1220	6.1	13.0	22	10.0	7.2	8	4	2
29...	1215	4.5	13.0	23	8.9	7.2	2	2	10
AUG									
05...	1225	3.5	13.0	24	9.8	7.2	6	<1	2
12...	1350	5.7	12.0	25	10.2	7.2	28	37	41
19...	1255	16	10.0	20	10.6	7.1	64	8	5
26...	1240	20	9.8	19	9.8	7.1	8	7	2
SEP									
02...	1320	9.2	10.5	21	10.6	7.2	20	3	3
10...	1030	16	9.0	21	10.4	7.1	4	3	3
17...	1115	19	7.5	20	10.8	7.1	<1	1	4
24...	1020	15	9.0	21	11.2	7.2	6	<1	1
30...	1230	10	9.5	22	10.8	7.2	10	10	9

SANDY RIVER BASIN

14138900 NORTH FORK BULL RUN RIVER NEAR MULTNOMAH FALLS, OR

LOCATION.--Lat 45°29'40", long 122°02'05", in NE¼SW¼ sec.11, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, Mount Hood National Forest, on right bank 6.9 mi (11.1 km) southeast of Multnomah Falls and at mile 0.1 (0.2 km).

DRAINAGE AREA.--8.32 mi² (21.55 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,080 ft (329 m), from topographic map.

REMARKS.--Records excellent except those for period Dec. 3-24, which are good. Regulation at times since 1958 by North Fork dam, capacity, about 1,030 acre-ft (1.27 hm³). No diversion above station.

AVERAGE DISCHARGE.--13 years, 80.9 ft³/s (2.291 m³/s), 132.05 in/yr (3,354 mm/yr), 58,610 acre-ft/yr (72.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,700 ft³/s (275 m³/s), probably affected by surge from release of water temporarily impounded by landslide upstream from station, Jan. 20, 1972, gage height, 9.89 ft (3.014 m), from floodmark, from rating curve extended above 850 ft³/s (24.1 m³/s) on basis of estimate of peak flow from slope-area survey; minimum, 9.4 ft³/s (0.27 m³/s) Aug. 18, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 15	0730	758	21.5	5.70	1.737	Dec. 2	1300	*3,190	90.3	*7.57	2.307
Nov. 25	1500	1,680	47.6	6.60	2.012	Dec. 6	1730	725	20.5	6.29	1.917
Nov. 29	0630	876	24.8	5.83	1.777	Dec. 13	0830	1,780	50.4	7.48	2.280

Minimum, 14 ft³/s (0.40 m³/s) Aug. 3-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	269	327	43	109	65	32	62	33	21	15	22
2	50	258	1910	41	200	54	38	53	32	21	15	21
3	41	146	473	73	161	48	43	46	30	23	14	20
4	34	86	280	99	109	45	43	49	28	22	14	21
5	31	70	181	105	105	42	50	44	26	21	14	27
6	42	60	479	105	107	41	44	40	24	20	14	24
7	117	104	291	97	113	52	40	36	23	19	14	21
8	75	69	177	131	101	54	37	33	23	18	14	29
9	56	57	125	120	90	43	35	33	31	18	14	36
10	46	51	233	105	73	40	33	35	42	18	14	66
11	38	46	489	83	65	40	32	69	46	17	14	78
12	34	47	340	116	56	39	31	50	33	17	23	56
13	32	102	1080	105	50	41	30	109	36	17	27	48
14	29	258	468	90	47	39	33	235	44	16	17	42
15	26	395	250	78	45	38	35	164	46	19	43	38
16	24	193	170	83	42	37	40	107	38	31	37	33
17	23	109	130	111	45	35	46	80	34	21	35	47
18	22	82	100	101	50	33	62	65	33	19	25	53
19	21	66	80	99	51	32	61	54	32	18	24	40
20	20	53	65	111	45	31	69	46	29	17	39	35
21	19	47	55	142	43	31	75	43	27	17	35	36
22	19	45	50	123	40	30	93	41	27	16	32	38
23	26	115	60	88	38	47	86	38	26	16	31	33
24	41	258	75	73	43	48	83	42	25	16	53	30
25	42	1320	111	70	101	48	80	40	28	16	41	27
26	44	389	80	73	208	40	154	39	24	16	33	25
27	32	258	69	61	103	37	188	65	22	16	29	24
28	31	238	60	62	76	35	131	52	21	15	25	23
29	75	503	61	56	---	34	92	43	21	15	23	21
30	189	160	60	48	---	35	75	38	23	15	21	22
31	167	---	52	63	---	32	---	35	---	15	24	---
TOTAL	1505	5854	8381	2755	2316	1266	1891	1886	907	567	773	1036
MEAN	48.5	195	270	88.9	82.7	40.8	63.0	60.8	30.2	18.3	24.9	34.5
MAX	189	1320	1910	142	208	65	188	235	46	31	53	78
MIN	19	45	50	41	38	30	30	33	21	15	14	20
CFSM	5.83	23.4	32.5	10.7	9.94	4.90	7.57	7.31	3.63	2.20	2.99	4.15
IN.	6.73	26.17	37.47	12.32	10.35	5.66	8.45	8.43	4.05	2.53	3.46	4.63
AC-FT	2990	11610	16620	5460	4590	2510	3750	3740	1800	1120	1530	2050

CAL YR 1977 TOTAL 30111.3 MEAN 82.5 MAX 1910 MIN 9.4 CFSM 9.92 IN 134.62 AC-FT 59730
WTR YR 1978 TOTAL 29137.0 MEAN 79.8 MAX 1910 MIN 14 CFSM 9.59 IN 130.26 AC-FT 57790

14138900 NORTH FORK BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	OXYGEN, DIS-SOLVED (MG/L)	PH (UNITS)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)
OCT									
02...	1150	42	8.8	22	11.6	7.1	20	0	<1
08...	1310	58	9.4	19	11.2	7.2	6	<1	1
15...	1100	22	8.7	25	11.4	7.3	52	0	<1
22...	1305	15	8.2	24	11.6	7.4	4	0	<1
29...	1305	58	8.0	21	11.5	7.2	4	1	2
NOV									
05...	1000	61	6.1	18	12.0	7.1	34	3	0
12...	1000	46	7.0	21	12.0	7.1	2	<1	<1
19...	1110	56	3.0	18	13.6	7.0	10	0	<1
25...	1330	1390	5.0	10	--	6.5	--	--	--
26...	1215	280	6.2	13	11.8	6.7	13	9	2
DEC									
02...	1000	2170	--	--	--	--	--	--	--
02...	1030	2250	7.0	--	--	--	--	--	--
02...	1330	2650	--	--	--	--	--	--	--
03...	1115	645	7.0	11	--	6.8	8	8	1
10...	1100	280	4.9	12	11.4	7.0	5	3	2
13...	0915	1750	7.0	9	--	6.7	--	--	--
14...	0915	517	7.0	10	--	6.9	--	--	--
17...	1030	130	4.0	15	12.8	7.1	1	1	<1
24...	1050	75	4.0	15	13.0	7.2	10	3	0
31...	1040	44	2.7	19	13.4	7.2	5	0	<1
JAN									
07...	1110	68	3.9	17	12.5	7.1	3	0	<1
14...	1040	78	4.1	16	15.9	7.1	<1	0	0
21...	1010	142	5.1	14	13.0	7.2	1	1	<1
28...	1010	49	4.2	18	13.0	7.3	<1	1	<1
FEB									
04...	1020	91	4.8	15	13.0	7.2	1	<1	<1
11...	1045	54	3.1	17	13.2	7.2	<1	0	<1
18...	1015	41	4.0	20	13.0	7.3	1	0	0
25...	1030	58	4.5	19	12.9	7.2	4	<1	0
MAR									
04...	1110	39	3.0	20	13.0	7.2	1	<1	<1
11...	1045	34	4.0	21	12.8	7.3	2	1	<1
18...	1045	29	5.1	23	12.2	7.4	<1	<1	<1
25...	1050	--	6.2	21	12.2	7.4	2	2	0
APR									
01...	1030	--	6.4	26	11.9	7.4	<1	<1	<1
08...	1010	32	5.0	23	12.2	7.3	<1	0	<1
15...	1025	28	6.0	24	12.4	7.3	<1	<1	<1
22...	1315	91	5.0	16	--	7.1	6	2	4
MAY									
01...	1110	145	6.5	20	11.6	7.0	2	<1	<1
08...	0910	31	6.8	25	11.9	7.2	1	<1	<1
08...	0930	46	7.5	20	13.2	7.2	1	<1	<1
MAY									
15...	0910	171	6.0	16	--	7.0	18	2	0
22...	0905	35	7.0	21	--	7.3	9	1	1
JUN									
04...	1040	25	10.5	28	--	7.2	31	3	--
12...	0900	28	9.2	25	11.0	7.3	19	0	1
19...	0930	28	8.5	25	12.2	7.4	19	1	1
26...	0925	21	9.0	28	--	7.4	10	0	0
JUL									
03...	0940	19	9.2	32	12.2	7.4	18	1	0
10...	0920	15	8.9	31	12.4	7.5	38	1	13
17...	0915	19	10.0	31	11.6	7.4	19	1	0
22...	1005	15	11.0	34	11.2	7.5	3	--	2
29...	1015	13	10.0	36	10.8	7.4	3	2	2
AUG									
05...	1030	12	10.0	38	12.0	7.4	2	0	1
12...	1135	19	10.7	38	11.1	7.5	64	39	30
19...	1040	21	10.1	30	10.8	7.4	40	8	5
26...	1045	29	9.2	27	10.8	7.3	8	2	2
SEP									
02...	1115	17	11.0	31	11.2	7.5	12	4	2
09...	1100	33	10.0	28	11.4	7.4	2	4	2
16...	1150	29	8.5	25	11.4	7.3	<1	2	<1
23...	1115	28	9.5	26	10.8	7.4	4	<1	<1
30...	1045	17	9.9	31	10.8	7.4	6	3	<2

14138900 NORTH FORK BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)	SILICA, DIS- SOLVED (MG/L AS SIO2)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT								
02...	.14	<5	10	<.02	.02	.00	--	--
08...	.18	5	9.2	<.02	.02	.00	--	--
15...	.11	<5	12	<.02	.02	.00	--	--
22...	.11	<5	14	<.02	.01	.01	--	--
29...	.29	5	10	<.02	.03	.01	--	--
NOV								
05...	.20	<5	9.3	<.02	.02	.01	--	--
12...	.20	<5	10	<.02	.03	.00	--	--
19...	.18	<5	9.1	<.02	.02	.00	--	--
25...	40	60	4.0	<.02	.02	.00	--	--
26...	2.2	10	6.2	<.02	.01	.00	--	--
DEC								
02...	70	--	--	--	--	--	--	--
02...	70	--	--	--	--	--	--	--
02...	75	--	--	--	--	--	--	--
03...	4.0	10	5.7	<.02	.01	.00	--	--
10...	1.6	5	5.8	<.02	.01	.00	--	--
13...	46	60	4.1	<.02	.02	.00	--	--
14...	5.1	25	5.2	<.02	.01	.00	--	--
17...	.30	<5	7.5	<.02	.01	.00	--	--
24...	2.9	7	7.5	<.02	.03	.00	--	--
31...	.21	<5	10	<.02	.02	.00	--	--
JAN								
07...	.30	<5	9.2	<.02	.02	.00	--	--
14...	.25	<5	8.4	<.02	.02	.00	--	--
21...	.56	<5	7.4	<.02	.03	.00	--	--
28...	.17	<5	.0	<.02	.02	.00	--	--
FEB								
04...	.70	5	8.4	<.02	.01	.01	--	--
11...	.19	<5	9.5	<.02	.01	.00	--	--
18...	.14	<5	11	<.02	.02	.00	--	--
25...	.22	<5	9.9	<.02	.02	.00	--	--
MAR								
04...	.13	<5	10	<.02	.01	.00	--	--
11...	.13	<5	11	<.02	.01	.00	--	--
18...	.12	<5	12	<.02	.01	.00	--	--
25...	.18	<5	10	<.02	.02	.00	--	--
APR								
01...	.14	<5	13	<.02	.01	.00	--	--
08...	.13	<5	11	<.02	.01	.00	--	--
15...	.14	<5	12	<.02	.01	.00	27	2.13
22...	.21	<5	8.4	<.02	.02	.02	18	4.67
MAY								
01...	.12	<5	7.0	.02	.02	<.00	20	7.99
08...	.15	<5	12	<.02	.01	.01	26	2.16
08...	.18	<5	9.4	<.02	.02	.00	23	2.99
MAY								
15...	.28	5	6.9	<.02	.01	.00	17	8.17
22...	.14	<5	10	<.02	.01	.00	22	2.17
JUN								
04...	.15	<5	12	<.02	.02	.01	25	1.71
12...	.16	<5	--	--	--	--	26	1.99
19...	.15	<5	--	<.02	.01	--	29	2.22
26...	.15	<5	--	--	--	--	28	1.65
JUL								
03...	.14	<5	14	<.02	.03	.01	32	1.69
10...	.12	<5	--	--	--	--	29	1.25
17...	.13	<5	--	<.02	.02	--	28	1.44
22...	.12	<5	--	--	--	--	30	1.22
29...	.10	<5	16	<.02	.03	.01	36	1.31
AUG								
05...	.11	<5	--	--	--	--	42	1.45
12...	.20	<5	--	<.02	.06	--	34	1.75
19...	.14	<5	--	--	--	--	29	1.70
26...	.17	<5	--	--	--	--	29	2.35
SEP								
02...	.18	<5	13	<.02	.02	.01	31	1.51
09...	.40	5	--	--	--	--	27	2.50
16...	.22	<5	--	<.02	.02	--	28	2.24
23...	.20	<5	--	--	--	--	30	2.31
30...	.16	<5	13	<.02	.03	.01	28	1.38

14138950 DEER CREEK NEAR BULL RUN, OR

LOCATION.--Lat 45°29'31", long 122°03'27", in SE¼SW¼ sec.10, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, on left bank 240 ft (73 m) upstream from culvert on Forest Service road S10, 300 ft (91 m) upstream from Bull Run Reservoir Number One, and 9.6 mi (15.4 km) northeast of Bull Run.

DRAINAGE AREA.--1.62 mi^2 (4.20 km^2).

PERIOD OF RECORD.--Chemical analysis: October 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	OXYGEN, DIS-SOLVED (MG/L)	PH (UNITS)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT								
02...	1200	--	9.7	17	11.3	7.0	14	0
08...	1320	--	10.4	16	10.8	7.1	10	2
15...	1110	--	9.9	18	11.0	7.1	144	<1
22...	1315	--	9.5	19	11.2	7.2	8	0
29...	1315	--	9.0	19	11.0	7.0	16	1
NOV								
12...	1010	--	8.0	16	11.6	7.0	<1	0
19...	1120	--	8.5	15	13.1	6.9	54	<1
26...	1225	67	7.7	13	11.3	6.7	3	1
DEC								
02...	1025	--	8.0	--	--	--	--	--
03...	1125	77	7.9	12	--	6.8	6	3
10...	1110	34	6.1	13	11.6	7.0	4	0
14...	1000	--	7.5	11	--	6.9	--	--
17...	1130	26	5.8	12	12.3	7.0	2	<1
24...	1100	14	5.6	13	12.5	7.1	16	0
31...	1050	8.3	3.0	13	13.0	7.1	19	<1
JAN								
07...	1120	13	5.0	14	12.0	7.0	3	<1
14...	1045	11	5.5	14	12.5	7.0	<1	1
21...	1020	16	6.2	13	12.5	7.1	2	2
28...	1020	8.3	5.1	14	12.7	7.1	<1	0
FEB								
04...	1030	14	6.3	13	12.3	7.1	1	<1
11...	1100	8.3	3.8	13	13.0	7.0	<1	0
18...	1025	6.2	5.1	14	12.5	7.1	1	<1
25...	1040	7.1	5.4	15	12.5	7.1	<1	<1
MAR								
04...	1120	6.2	3.1	14	12.9	7.1	<1	0
11...	1055	4.5	4.0	15	12.8	7.1	1	0
18...	1055	3.2	5.8	15	12.0	7.2	20	0
25...	1100	3.2	7.6	16	11.6	7.2	<1	<1
APR								
01...	1040	2.2	7.0	17	11.6	7.2	<1	<1
08...	1020	3.2	6.0	16	11.8	7.1	1	<1
15...	1035	2.3	7.0	16	12.2	7.1	<1	<1
22...	1330	24	6.0	15	--	7.0	14	1
MAY								
01...	1120	10	7.0	16	11.6	7.0	5	0
08...	0920	35	7.1	17	11.8	7.0	7	0
15...	0920	22	--	15	--	7.0	--	--
22...	0915	5.7	--	15	13.2	7.1	8	2
28...	0940	7.1	8.0	16	12.8	6.9	1	0
JUN								
04...	1040	3.2	13.0	19	--	7.0	87	0
12...	0910	3.2	11.0	18	10.2	7.1	25	2
19...	0940	4.3	10.3	18	11.4	7.1	16	1
JUN								
26...	0935	2.5	10.8	19	--	7.3	44	2
JUL								
03...	0950	1.8	11.6	22	11.4	7.2	29	8
10...	0930	1.4	11.0	20	11.0	7.1	34	1
17...	0925	2.0	12.0	21	10.9	7.2	17	10
22...	1015	1.4	15.0	22	9.8	7.2	9	--
29...	1025	1.2	13.5	23	9.4	7.2	4	2
AUG								
05...	1040	1.0	13.2	25	10.6	7.1	4	8
12...	1145	1.6	14.5	25	9.6	7.3	120	110
19...	1050	3.8	12.0	20	10.4	7.1	32	4
26...	1050	6.4	10.0	20	11.0	7.2	12	3
SEP								
02...	1125	2.5	13.5	20	9.8	7.3	12	14
09...	1200	3.8	11.2	21	10.2	7.1	22	19
16...	1225	5.7	9.5	18	10.0	7.1	2	4
23...	1135	6.4	11.0	19	11.7	7.2	10	3
30...	1055	3.0	11.5	21	10.6	7.2	10	2

14138950 DEER CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)	TUR-BID-ITY (NTU)	COLOR (PLAT-INUM-COBALT UNITS)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)
OCT							
02...	0	.10	<5	7.5	<.02	.03	<.00
08...	<1	.12	<5	7.5	<.02	.02	<.00
15...	<1	.14	<5	8.3	<.02	.02	<.00
22...	<1	.11	<5	8.6	<.02	.01	.00
29...	1	.13	<5	8.1	<.02	.02	<.00
NOV							
12...	<1	.11	5	7.8	<.02	.03	<.00
19...	0	.11	<5	6.9	<.02	.03	<.00
26...	<1	.45	<5	5.7	<.02	.04	<.00
DEC							
02...	--	19	--	--	--	--	--
03...	<1	1.1	5	5.6	<.02	.04	<.00
10...	<1	.25	<5	5.8	<.02	.03	<.00
14...	--	.41	<5	5.1	<.02	.04	<.00
17...	<1	.20	<5	6.2	<.02	.03	<.00
24...	<1	.13	<5	6.5	<.02	.04	<.00
31...	<1	.11	<5	6.8	<.02	.04	<.00
JAN							
07...	<1	.12	<5	6.7	<.02	.03	<.00
14...	<1	.12	<5	6.5	<.02	.04	<.00
21...	1	.16	<5	--	<.02	.04	<.00
28...	<1	.09	<5	6.8	<.02	.03	<.00
FEB							
04...	<1	.11	<5	6.4	<.02	.02	<.00
11...	<1	.08	<5	6.7	<.02	.02	.00
18...	<1	.08	<5	7.0	<.02	.02	<.00
25...	<1	.11	<5	7.0	<.02	.02	.00
MAR							
04...	<1	.08	<5	6.9	<.02	.02	<.00
11...	<1	.09	<5	7.2	<.02	.02	<.00
18...	<1	.08	<5	7.6	<.02	.02	.00
25...	<1	.10	<5	8.0	<.02	<.02	<.00
APR							
01...	<1	.09	<5	8.3	<.02	.02	<.00
08...	<1	.09	<5	7.8	<.02	.01	<.00
15...	0	.09	<5	8.2	<.02	.01	<.00
22...	0	.24	<5	6.7	<.02	.03	<.00
MAY							
01...	<1	.12	<5	7.0	<.02	.02	<.00
08...	0	.10	<5	7.5	<.02	.02	<.00
15...	--	.16	<5	6.1	<.02	.02	<.00
22...	3	.10	<5	6.7	<.02	.02	<.00
28...	2	.11	<5	6.9	<.02	.02	<.00
JUN							
04...	7	.12	<5	--	<.02	.02	<.00
12...	6	.12	<5	--	--	--	--
19...	1	.11	<5	--	<.02	.02	--
JUN							
26...	5	.11	<5	--	--	--	--
JUL							
03...	8	.11	<5	8.4	<.02	.02	.00
10...	12	.09	<5	--	--	--	--
17...	7	.09	<5	--	<.02	.02	--
22...	1	.10	<5	--	--	--	--
29...	12	.09	<5	9.4	<.02	.01	<.00
AUG							
05...	12	.09	<5	--	--	--	--
12...	120	.15	<5	--	<.02	.02	--
19...	10	.10	<5	--	--	--	--
26...	7	.09	<5	--	--	--	--
SEP							
02...	7	.09	<5	8.6	<.02	.02	<.00
09...	3	.15	<5	--	--	--	--
16...	<1	.16	<5	--	<.02	.03	--
23...	1	.14	<5	--	--	--	--
30...	0	.10	<5	8.4	<.02	.02	<.00

14138960 COUGAR CREEK NEAR BULL RUN, OR

LOCATION.--Lat 45°29'28", long 122°03'40", in SW¼SW¼ sec.10, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, Mount Hood National Forest, at culvert on Forest Service road S10, 300 ft (91 m) upstream from Bull Run Reservoir Number One, and 9.4 mi (15.1 km) northeast of Bull Run.

DRAINAGE AREA.--3.06 mi^2 (7.93 km^2).

PERIOD OF RECORD.--Chemical analysis: October 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	OXYGEN, DIS-SOLVED (MG/L)	PH (UNITS)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)
OCT									
02...	1210	69	8.9	13	11.4	6.9	18	1	<1
08...	1330	23	9.2	13	11.0	6.9	4	1	<1
15...	1120	9.6	9.0	14	11.3	7.0	84	2	0
22...	1320	5.1	9.1	15	11.4	7.1	2	<1	<1
29...	1320	1.3	8.0	14	11.2	6.9	18	1	1
NOV									
05...	1020	22	6.7	13	11.6	6.9	48	1	<1
12...	1020	14	7.1	14	11.8	6.9	<1	0	<1
19...	1130	21	3.5	13	13.1	6.9	27	<1	<1
26...	1230	68	6.8	11	11.6	6.7	3	3	2
DEC									
02...	1020	--	9.0	--	--	--	--	--	--
03...	1135	145	7.0	11	--	6.8	4	2	<1
10...	1115	72	5.1	10	11.9	6.9	<1	2	<1
14...	0935	234	7.0	9	--	6.9	--	--	--
14...	1110	34	5.0	13	12.6	6.9	13	1	0
17...	1140	48	5.0	12	12.4	7.0	<1	5	0
31...	1100	18	3.2	13	12.8	7.0	5	0	<1
JAN									
07...	1130	24	4.1	12	12.3	7.0	2	3	<1
14...	1050	29	5.1	12	12.6	7.0	<1	0	<1
21...	1030	42	5.8	11	12.5	7.1	2	1	<1
28...	1030	21	4.9	12	12.8	7.1	<1	0	<1
FEB									
04...	1040	34	5.2	10	12.4	7.1	<1	<1	<1
11...	1110	19	3.4	11	13.0	7.0	<1	<1	<1
18...	1035	13	4.7	13	12.8	7.1	<1	<1	<1
25...	1050	15	5.0	12	12.6	7.0	<1	<1	<1
MAR									
04...	1130	13	3.3	12	12.8	7.1	<1	<1	<1
11...	1105	10	4.2	12	12.8	7.1	<1	<1	<1
18...	1105	8.1	6.0	13	11.9	7.1	15	<1	<1
25...	1110	7.5	6.8	13	12.0	7.1	<1	<1	<1
APR									
01...	1050	5.0	6.8	14	11.8	7.1	<1	<1	<1
08...	1030	8.1	5.0	13	12.2	7.0	<1	<1	<1
15...	1045	5.9	6.8	13	12.0	7.0	<1	<1	<1
22...	1340	2.5	6.0	12	--	6.9	1	0	<1
MAY									
01...	1130	32	6.5	13	11.8	6.8	5	<1	<1
08...	0925	10	6.5	15	11.6	6.8	9	<1	<1
15...	0930	40	6.0	12	--	6.9	28	0	0
22...	0920	13	7.0	13	13.3	7.0	14	<1	0
28...	0950	16	7.2	13	13.0	6.9	1	0	<1
JUN									
04...	1050	8.3	11.5	15	--	6.6	65	0	5
12...	0920	7.2	10.0	14	10.4	7.0	11	0	2
JUN									
19...	0945	8.3	9.3	14	11.6	7.0	22	3	4
26...	0940	5.6	10.0	15	--	7.0	12	1	3
JUL									
03...	1000	3.7	11.0	17	11.2	7.0	24	15	3
10...	0935	1.7	10.0	16	.0	7.0	34	2	1
17...	0930	3.7	11.0	16	11.1	7.0	14	3	3
22...	1020	1.5	13.5	17	10.6	7.0	5	8	3
29...	1030	1.1	13.0	18	9.6	7.1	4	5	4
AUG									
05...	1045	.66	13.2	19	10.8	7.0	2	0	4
12...	1150	1.2	13.5	21	9.9	7.0	34	24	140
19...	1055	4.8	11.0	16	11.0	6.9	28	6	5
26...	1055	10	10.0	15	13.6	7.0	4	4	10
SEP									
02...	1130	5.6	12.0	17	10.9	7.1	12	2	4
09...	1210	7.2	10.1	16	12.3	7.0	4	1	2
16...	1235	9.8	9.0	14	10.2	7.0	<1	1	<1
23...	1145	12	10.0	15	11.4	7.0	2	<1	<1
30...	1105	8.1	10.5	17	10.5	7.1	14	6	1

14138960 COUGAR CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TUR-BID-ITY (NTU)	COLOR (PLAT-INUM-COBALT UNITS)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)
OCT								
02...	.09	<5	6.5	<.02	<.01	<.00	--	--
04...	.09	<5	6.3	<.02	.01	<.00	--	--
15...	.10	<5	7.4	<.02	.01	<.00	--	--
22...	.08	<5	7.9	<.02	<.01	<.00	--	--
29...	.09	<5	6.8	<.02	.02	<.00	--	--
NOV								
05...	.09	<5	6.3	<.02	.01	<.00	--	--
12...	.10	<5	.0	<.02	.01	.00	--	--
19...	.10	<5	6.3	<.02	.01	<.00	--	--
26...	.41	<5	5.3	<.02	.01	<.00	--	--
DEC								
02...	15	--	--	--	--	--	--	--
03...	1.5	5	5.3	<.02	.01	<.00	--	--
10...	.30	5	5.2	<.02	.02	<.00	--	--
14...	.65	5	4.7	<.02	.01	<.00	--	--
14...	.13	<5	6.2	<.02	.02	<3.0	--	--
17...	.15	<5	6.6	<.02	.02	<.00	--	--
31...	.10	<5	6.8	<.02	.01	<.00	--	--
JAN								
07...	.09	<5	6.4	<.02	.01	<.00	--	--
14...	.10	<5	6.0	<.02	<.01	.00	--	--
21...	.13	<5	5.7	<.02	.01	<.00	--	--
28...	.08	<5	6.6	<.02	.01	<.00	--	--
FEB								
04...	.09	<5	5.7	<.02	.01	<.00	--	--
11...	.08	<5	6.2	<.02	<.01	<.00	--	--
18...	.09	<5	6.7	<.02	.01	<.00	--	--
25...	.09	<5	6.2	<.02	.01	<.00	--	--
MAR								
04...	.07	<5	6.4	<.02	.01	<.00	--	--
11...	.08	<5	6.7	<.02	.01	<.00	--	--
18...	.08	<5	7.1	<.02	.01	<.00	--	--
25...	.11	<5	7.1	<.02	.01	<.00	--	--
APR								
01...	.08	<5	7.4	<.02	.01	.00	--	--
08...	.09	<5	6.6	<.02	<.01	<.00	--	--
15...	.07	<5	6.8	<.02	.01	<.00	15	.25
22...	.15	<5	5.7	<.02	.02	<.00	12	.09
MAY								
01...	.10	<5	6.2	<.02	.01	<.00	12	1.11
08...	.09	<5	6.8	<.02	.01	<.00	15	.43
15...	.11	<5	5.2	<.02	<.01	<.00	11	1.30
22...	.09	<5	6.4	<.02	<.01	<.00	--	--
28...	.10	<5	6.0	<.02	.01	.00	14	.62
JUN								
04...	.10	<5	6.9	<.02	.01	<.00	11	.26
12...	.09	<5	--	--	--	--	14	.28
JUN								
19...	.10	<5	--	<.02	.01	--	16	.38
26...	.09	<5	--	--	--	--	14	.22
JUL								
03...	.10	<5	7.6	<.02	.03	<.00	17	.18
10...	.10	<5	--	--	--	--	17	.08
17...	.11	<5	--	<.02	.02	--	12	.13
22...	.09	<5	--	--	--	--	13	.06
29...	.09	<5	8.5	<.02	.04	<.00	19	.06
AUG								
05...	.09	<5	--	--	--	--	24	.04
12...	.12	<5	--	<.02	.05	--	18	.06
19...	.09	<5	--	--	--	--	18	.24
26...	.09	<5	--	--	--	--	17	.50
SEP								
02...	.09	<5	7.5	<.02	.01	<.00	16	.25
09...	.11	<5	--	--	--	--	17	.33
16...	.13	5	--	<.02	.01	--	15	.42
23...	.18	<5	--	--	--	--	18	.64
30...	.08	<5	7.5	<.02	.02	<.00	15	.34

14138990 BEAR CREEK NEAR BULL RUN, OR

LOCATION.--Lat 45°29'18", long 122°04'58", in NW¼NW¼ sec.16, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, Mount Hood National Forest, at culvert on Forest Service road S10, 400 ft (122 m) upstream from Bull Run Reservoir Number One, and 8.3 mi (13.4 km) northeast of Bull Run.

DRAINAGE AREA.--1.68 mi² (4.35 km²).

PERIOD OF RECORD.--Chemical analyses: October 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	OXYGEN, DIS-SOLVED (MG/L)	PH (UNITS)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)
OCT									
02...	1220	5.8	9.0	15	11.3	7.0	32	<1	0
08...	1340	6.3	9.9	14	11.0	7.0	2	0	0
15...	1130	3.0	9.4	14	11.0	7.0	120	1	0
22...	1330	1.9	9.2	14	11.2	7.1	12	<1	<1
29...	1330	3.7	8.8	16	11.1	7.0	16	<1	<3
NOV									
05...	1030	12	7.1	14	11.4	7.0	66	<1	<1
12...	1030	4.5	7.9	14	11.6	7.1	2	1	<1
19...	1145	10	4.5	14	12.8	7.0	45	0	<1
26...	1235	30	7.0	13	11.4	6.8	1	2	0
DEC									
03...	1145	93	7.1	11	--	6.7	2	3	<1
10...	1125	--	6.0	12	12.0	7.0	3	0	<1
17...	1150	26	5.3	12	12.4	7.0	5	--	<1
24...	1120	11	5.9	13	12.0	7.1	6	<1	<1
31...	1110	32	3.8	13	12.8	7.1	11	<1	<1
JAN									
07...	1140	11	5.1	13	11.9	7.0	1	<1	<1
14...	1055	11	6.0	13	12.1	7.0	1	0	<1
21...	1040	14	6.1	13	12.4	7.1	<1	<1	<1
28...	1040	7.7	5.6	12	12.4	7.1	<1	<1	<1
FEB									
04...	1050	13	6.7	12	12.2	7.1	<1	<1	0
11...	1120	9.9	4.0	12	12.7	7.1	<1	<1	<1
18...	1045	4.4	5.1	13	12.4	7.1	1	0	1
25...	1100	5.5	5.7	13	12.3	7.1	<1	<1	<1
MAR									
04...	1140	6.2	4.0	13	12.6	7.1	1	1	<1
11...	1115	3.9	4.8	12	12.6	7.1	1	<1	<1
18...	1115	3.0	6.0	13	12.0	7.1	3	<1	<1
25...	1120	2.7	7.0	13	11.8	7.1	<1	<1	<1
APR									
01...	1100	1.7	7.0	13	11.8	7.1	<1	<1	<1
08...	1040	2.4	6.0	13	12.0	7.0	<1	<1	<1
15...	1055	2.0	6.8	13	12.2	7.0	<1	<1	<1
22...	1350	13	5.8	13	--	6.9	9	<1	2
MAY									
01...	1140	22	6.5	15	11.8	6.9	14	0	<1
08...	0935	4.6	6.8	14	11.7	6.9	10	<1	2
15...	0940	1.8	6.5	15	--	6.9	15	1	2
22...	0930	6.2	7.0	13	13.2	7.0	9	<1	<1
28...	1020	4.6	8.0	13	12.8	7.0	1	0	1
JUN									
04...	1100	2.5	11.3	15	--	6.9	27	1	2
12...	0930	2.5	10.1	15	10.2	7.0	26	3	1
19...	0955	2.5	9.5	15	11.2	7.0	36	5	4
26...	0950	2.0	10.0	15	10.8	7.0	38	3	0
JUL									
03...	1010	1.1	10.9	16	11.6	7.0	18	15	25
10...	0945	1.1	10.3	15	11.4	7.0	25	14	5
17...	0940	1.1	11.2	16	10.9	7.0	21	14	9
22...	1130	1.1	13.6	16	10.6	7.0	15	22	1
29...	1040	.70	13.0	17	9.6	6.9	2	7	1
AUG									
05...	1055	.48	13.5	17	10.6	7.0	4	5	1
12...	1200	.92	14.0	18	9.9	7.0	48	30	40
19...	1105	2.0	11.5	16	10.7	6.9	40	14	7
26...	1105	3.9	10.0	16	11.0	7.0	32	5	2
SEP									
02...	1140	2.0	12.0	16	10.4	7.1	12	12	2
09...	1225	2.5	11.0	16	11.6	7.0	4	7	2
16...	1245	4.6	9.5	15	12.6	7.0	4	<1	1
23...	1155	5.5	10.0	16	10.9	7.0	4	3	1
30...	1115	2.5	11.0	17	10.6	7.1	14	4	2

14138990 BEAR CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)	SILICA, DIS- SOLVED (MG/L AS SIO2)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO. TOTAL (MG/L AS P)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT								
02...	.09	<5	7.5	<.02	.03	<.00	--	--
08...	.09	<5	7.5	<.02	.03	<.00	--	--
15...	.12	<5	7.6	<.02	.03	.00	--	--
22...	.09	<5	--	<.02	.02	<.00	--	--
29...	.10	<5	7.7	<.02	.03	<.00	--	--
NOV								
05...	.13	<5	7.3	<.02	.03	<.00	--	--
12...	.12	<5	7.4	<.02	.03	<.00	--	--
19...	.10	<5	7.0	<.02	.02	.00	--	--
26...	.57	<5	5.9	<.02	.03	<.00	--	--
DEC								
03...	11	5	5.6	<.02	.03	.00	--	--
10...	.31	<5	5.9	<.02	.02	<.00	--	--
17...	.26	<5	6.3	<.02	.03	<.00	--	--
24...	.15	<5	6.9	<.02	.03	<.00	--	--
31...	.12	<5	7.0	<.02	.03	<.00	--	--
JAN								
07...	.12	<5	7.2	<.02	.03	.00	--	--
14...	.12	<5	6.7	<.02	.03	<.00	--	--
21...	.16	<5	6.9	<.02	.03	.00	--	--
28...	.09	<5	7.2	<.02	.03	<.00	--	--
FEB								
04...	.10	<5	6.7	<.02	.02	<.00	--	--
11...	.10	<5	6.7	<.02	.02	<.00	--	--
18...	.08	<5	6.8	<.02	.02	<.00	--	--
25...	.12	<5	6.9	<.02	.02	.01	--	--
MAR								
04...	.09	<5	6.7	<.02	.02	.00	--	--
11...	.09	5	6.8	<.02	.02	<.00	--	--
18...	.08	<5	7.0	<.02	.02	<.00	--	--
25...	.10	<5	7.2	<.02	.02	<.00	--	--
APR								
01...	.10	<5	7.2	<.02	.02	<.00	--	--
08...	.09	<5	7.1	<.02	.01	<.00	--	--
15...	.08	<5	7.1	<.02	.01	<.00	15	.09
22...	.25	<5	--	<.02	.04	<.00	16	.59
MAY								
01...	.16	<5	7.0	<.02	.02	<.00	13	.84
08...	.09	<5	7.0	<.02	.01	<.00	14	.19
15...	.14	<5	6.6	<.02	.02	<.00	13	.07
22...	.12	<5	6.5	<.02	.01	<.00	14	.24
28...	.11	<5	7.2	<.02	.02	<.00	15	.19
JUN								
04...	.12	<5	7.2	<.02	.01	.00	12	.09
12...	.12	<5	7.3	<.02	.02	<.00	14	.10
19...	.10	<5	--	<.02	.01	--	17	.12
26...	.09	<5	7.5	<.02	.01	<.00	14	.08
JUL								
03...	.11	5	7.3	<.02	.02	<.00	17	.06
10...	<.09	<5	--	--	--	--	15	.05
17...	.11	<5	--	<.02	.02	--	14	.04
22...	.11	<5	--	--	--	--	14	.05
29...	.11	<5	7.8	<.02	.02	<.00	18	.03
AUG								
05...	.09	<5	--	--	--	--	22	.03
12...	.13	<5	--	<.02	.03	--	17	.04
19...	.09	<5	--	--	--	--	17	.10
26...	.11	<5	--	--	--	--	19	.20
SEP								
02...	.10	<5	7.6	<.02	.02	<.00	16	.09
09...	.11	<5	--	--	--	--	16	.12
16...	.25	<5	--	<.02	.02	--	16	.21
23...	.16	5	--	--	--	--	19	.29
30...	.14	<5	7.4	<.02	.02	<.00	14	.10

14139000 BULL RUN RESERVOIR NUMBER ONE NEAR BULL RUN, OR

LOCATION.--Lat 45°28'50", long 122°04'50", in NW¼SW¼ sec.16, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, in Mount Hood National Forest, in control house of Bear Creek Dam on Bull Run River, 8.2 mi (13.2 km) northeast of Bull Run, and at mile 11.2 (18.0 km).

DRAINAGE AREA.--74.6 mi^2 (193.0 km^2).

PERIOD OF RECORD.--October 1928 to current year. Prior to October 1937, published as Bull Run Reservoir. October 1937 to September 1967, published as Lake Ben Morrow. Prior to October 1975, monthend contents only.

REVISED RECORDS.--WSP 814: 1935(M). WSP 1935: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Portland Water Bureau). Prior to Oct. 9, 1930, nonrecording gage, Oct. 9, 1930, to Sept. 30, 1962, water-stage recorder at present site and datum, and Oct. 1, 1962, to Dec. 31, 1975, nonrecording gage at present site and datum.

REMARKS.--Lake is formed by concrete dam completed in March 1929 for water supply of city of Portland. Storage began about Apr. 29, 1929; first filling occurred May 15, 1929. Capacity, 26,930 acre-ft (33.2 hm^3) at crest of spillway, elevation, 1,036.0 ft (315.77 m); capacity increased in October 1954 to 30,140 acre-ft (37.2 hm^3) at elevation 1,044.0 ft (318.21 m) by installation of three gates 40 ft (12 m) wide and 8 ft (2.4 m) high. No dead storage. Water is used for power generation by Portland General Electric Co. and municipal supply for city of Portland.

COOPERATION.--Capacity table furnished by Portland Water Bureau.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 31,600 acre-ft (39.0 hm^3) Mar. 31, 1931, elevation, 1,047.40 ft (319.248 m); minimum observed, 169 acre-ft (208,000 m^3) Jan. 10, 1960, elevation, 887.5 ft (270.51 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 31,430 acre-ft (38.8 hm^3) Dec. 2, elevation, 1,046.99 ft (319.123 m); minimum, 24,310 acre-ft (30.0 hm^3) Aug. 15, elevation, 1,028.97 ft (313.630 m).

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1041.90	1044.29	1040.19	1036.95	1039.60	1037.20	1043.47	1043.90	1044.70	1045.44	1038.90	1044.36
2	1041.56	1039.00	1043.69	1036.94	1042.00	1037.00	1043.65	1044.67	1044.91	1045.73	1037.98	1044.18
3	1041.24	1037.97	1040.77	1037.48	1040.00	1036.90	1043.88	1044.53	1045.01	1045.50	1037.04	1043.95
4	1041.34	1037.57	1039.32	1037.52	1037.80	1036.90	1044.19	1044.44	1044.89	1045.28	1036.19	1043.81
5	1041.23	1037.43	1038.43	1037.82	1037.80	1036.90	1044.72	1044.39	1044.90	1045.37	1035.41	1043.74
6	1041.34	1037.30	1041.18	1037.69	1037.80	1036.90	1044.23	1044.25	1045.02	1045.50	1034.63	1043.96
7	1043.48	1037.60	1038.63	1037.79	1037.80	1037.00	1043.55	1044.64	1044.96	1045.53	1033.78	1043.61
8	1044.61	1037.43	1037.57	1038.02	1037.70	1037.00	1043.52	1044.88	1045.06	1045.54	1032.97	1043.32
9	1044.89	1037.25	1037.46	1037.93	1037.60	1036.90	1043.37	1044.72	1045.65	1045.53	1032.18	1043.18
10	1044.46	1037.18	1038.51	1037.75	1037.40	1036.90	1043.31	1044.70	1045.57	1045.53	1031.27	1043.91
11	1043.84	1037.07	1040.62	1037.53	1037.30	1036.90	1043.40	1044.54	1044.94	1045.53	1030.39	1045.43
12	1043.13	1037.02	1039.51	1037.77	1037.10	1036.90	1043.42	1044.36	1044.44	1045.51	1029.89	1045.54
13	1042.31	1037.73	1042.16	1037.67	1037.00	1036.90	1043.39	1045.33	1044.38	1045.49	1029.40	1045.52
14	1041.94	1039.56	1039.52	1037.47	1037.00	1036.95	1043.40	1045.18	1044.78	1045.18	1028.98	1045.55
15	1041.89	1039.46	1037.91	1037.40	1037.00	1036.91	1043.45	1044.43	1044.69	1044.56	1030.49	1045.43
16	1041.79	1038.32	1038.17	1038.32	1037.00	1036.90	1043.74	1044.26	1044.40	1044.90	1032.56	1045.35
17	1040.93	1037.81	1037.90	1039.40	1037.00	1036.90	1044.15	1044.15	1044.63	1045.26	1034.28	1045.94
18	1040.37	1037.55	1037.55	1039.49	1036.90	1036.90	1044.43	1044.03	1044.92	1045.56	1035.50	1046.03
19	1039.95	1037.44	1037.48	1039.40	1036.90	1036.90	1044.47	1044.16	1044.71	1045.64	1036.67	1046.13
20	1039.40	1037.21	1037.37	1037.92	1037.00	1037.32	1044.49	1044.20	1044.89	1045.64	1038.30	1045.06
21	1038.79	1037.05	1037.24	1038.04	1037.00	1037.52	1044.79	1044.02	1045.27	1045.52	1039.75	1040.10
22	1038.39	1036.97	1037.18	1037.87	1037.00	1037.77	1045.19	1044.30	1045.57	1045.63	1040.48	1037.21
23	1038.18	1037.99	1037.29	1037.55	1037.00	1038.78	1044.45	1044.67	1045.69	1045.43	1040.93	1036.91
24	1038.41	1039.19	1037.95	1037.41	1037.00	1039.95	1044.28	1044.79	1045.70	1045.27	1042.15	1036.78
25	1039.01	1043.97	1037.90	1037.32	1037.80	1040.98	1044.52	1044.68	1045.76	1044.87	1043.22	1037.54
26	1039.62	1039.64	1037.54	1037.40	1038.20	1041.78	1045.26	1044.55	1045.70	1044.69	1043.94	1038.63
27	1039.67	1039.57	1037.39	1037.20	1037.60	1042.44	1044.52	1045.33	1045.66	1043.92	1044.33	1038.92
28	1039.63	1038.88	1037.24	1037.20	1037.40	1042.99	1044.20	1045.20	1045.51	1042.88	1044.48	1038.40
29	1040.48	1039.55	1037.23	1037.20	---	1043.26	1044.07	1045.62	1045.40	1041.78	1044.56	1037.82
30	1044.60	1038.41	1037.21	1037.10	---	1043.44	1043.64	1044.70	1045.03	1040.71	1044.47	1037.49
31	1044.98	---	1037.05	1038.00	---	1043.48	---	1045.29	---	1039.77	1044.45	---
MEAN	1041.40	1038.45	1038.55	1037.76	1037.67	1038.43	1044.04	1044.61	1045.09	1044.80	1037.08	1042.46
MAX	1044.98	1044.29	1043.69	1039.49	1042.00	1043.48	1045.26	1045.62	1045.76	1045.73	1044.56	1046.13
MIN	1038.18	1036.97	1037.05	1036.94	1036.90	1036.90	1043.31	1043.90	1044.38	1039.77	1028.98	1036.78
(†)	30,560	27,870	27,340	27,710	27,480	29,920	29,990	30,690	30,580	28,410	30,330	27,510
(‡)	+1,330	-2,690	-530	+370	-230	+2,440	+70	+700	-110	-2,170	+1,920	-2,820

CAL YR 1977 MEAN 1038.68 MAX 1046.00 MIN 1000.15 AC-FT‡ -110
WTR YR 1978 MEAN 1040.87 MAX 1046.13 MIN 1028.98 AC-FT‡ -1,720

† Contents, in acre-feet, at 2400, on last day of month.
‡ Change in contents, in acre-feet.

14139510 FIVEMILE CREEK NEAR BULL RUN, OR

LOCATION.—Lat 45°28'57", long 122°05'25", in SW¼NE¼ sec.17, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, Mount Hood National Forest, at culvert on Forest Service road S10, 800 ft (244 m) upstream from Bull Run Reservoir Number Two, and 7.9 mi (12.7 km) northeast of Bull Run.

DRAINAGE AREA.—0.79 mi² (2.05 km²).

PERIOD OF RECORD.—Chemical analyses: October 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	OXYGEN, DIS-SOLVED (MG/L)	PH (UNITS)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT								
02...	1240	5.7	9.6	16	11.0	7.0	24	1
08...	1355	6.5	10.2	16	10.8	7.0	12	3
15...	1145	3.2	10.5	16	10.8	6.9	140	1
22...	1345	.89	10.0	16	10.9	7.0	16	<1
29...	1345	2.5	9.0	16	11.0	7.0	46	<1
NOV								
05...	1045	6.5	8.0	16	11.2	7.0	82	2
12...	1045	2.8	8.2	16	11.4	7.1	<1	<1
19...	1215	6.5	5.0	16	12.0	7.0	20	<1
26...	1245	22	8.0	14	11.1	6.7	10	2
DEC								
02...	1010	--	7.0	--	--	--	--	--
03...	1200	28	8.0	13	--	6.9	4	0
10...	1150	14	8.0	13	--	6.9	--	--
14...	1000	--	7.0	12	--	7.0	--	--
17...	1215	--	6.6	13	11.9	7.1	1	<1
24...	1200	5.1	6.5	14	11.8	7.1	9	<1
31...	1145	4.7	4.4	13	12.6	7.0	25	28
JAN								
07...	1155	6.8	6.0	14	11.7	7.0	1	<1
14...	1130	6.8	6.0	14	12.0	7.0	<1	<1
21...	1100	7.1	6.9	13	12.0	7.1	<1	<1
28...	1105	3.3	6.1	13	12.4	7.1	1	0
FEB								
04...	1130	5.7	7.0	13	11.8	7.2	1	<1
11...	1150	3.8	4.9	13	12.5	7.1	<1	<1
18...	1105	2.1	6.0	14	12.2	7.1	<1	<1
25...	1120	2.1	5.9	14	12.2	7.1	<1	<1
MAR								
04...	1205	3.3	4.6	13	12.3	7.1	<1	0
11...	1140	2.3	5.0	14	12.5	7.1	<1	2
18...	1135	--	5.0	14	11.4	7.1	7	<1
25...	1140	--	7.2	14	11.7	7.1	<1	<1
APR								
01...	1125	.68	7.0	14	11.6	7.1	1	1
08...	1105	1.4	6.0	13	11.8	7.0	<1	0
15...	1115	.68	6.9	14	12.2	7.0	--	--
22...	1410	1.0	6.2	14	--	6.9	8	1
MAY								
01...	1155	.68	9.0	15	--	7.0	13	<1
08...	1000	1.9	8.0	16	--	6.9	13	<1
15...	1000	1.6	7.0	15	--	6.9	26	<1
22...	0955	4.5	7.0	14	13.2	7.1	15	<1
28...	1020	3.7	8.0	15	12.4	7.0	<1	<1
JUN								
04...	1120	1.6	12.2	17	--	6.8	72	9
12...	1000	1.6	10.5	16	9.9	7.1	30	1
JUN								
19...	1015	2.4	9.5	16	11.0	7.0	33	1
26...	1010	1.6	10.0	16	10.6	6.9	22	1
JUL								
03...	1035	.60	11.0	18	11.6	7.0	7	2
10...	1005	.27	10.5	16	10.8	7.0	29	4
17...	1005	.60	11.3	17	--	7.0	16	7
22...	1050	.27	14.8	18	9.9	6.9	13	5
29...	1105	.27	14.0	18	8.8	6.8	3	2
AUG								
05...	1105	.08	14.8	19	9.8	6.9	8	10
12...	1220	.27	14.0	19	--	6.9	--	--
19...	1120	1.1	12.0	17	10.4	6.9	120	44
26...	1120	3.7	10.5	16	10.4	7.0	24	8
SEP								
02...	1150	1.6	12.2	17	.1	7.1	24	15
09...	1245	1.6	11.0	17	11.1	7.0	12	7
16...	1310	3.0	9.5	17	11.5	7.0	2	1
23...	1215	3.7	10.5	17	11.4	7.1	6	3
30...	1125	--	11.4	18	11.0	7.0	40	7

14139510 FIVEMILE CREEK NEAR BULL RUN, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)	TUR-BID-ITY (NTU)	COLOR (PLAT-INUM-COBALT UNITS)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)
OCT							
02...	4	.16	<5	8.1	<.02	.02	<.00
08...	0	.12	<5	7.9	<.02	.02	<.00
15...	0	.11	<5	8.5	<.02	.02	<.00
22...	<1	.11	<5	8.5	<.02	<.02	<.00
29...	3	.15	<5	8.0	<.02	.02	<.00
NOV							
05...	<1	.16	<5	8.0	<.02	.02	<.00
12...	<1	.14	<5	8.3	<.02	.03	<.00
19...	<1	.15	<5	7.7	<.02	.02	.00
26...	1	.77	<5	6.8	<.02	.02	<.00
DEC							
02...	--	3.5	--	--	--	--	--
03...	0	.83	<5	6.4	<.02	.03	<.00
10...	--	.19	<5	6.7	<.02	.02	<.00
14...	--	1.1	7	6.0	<.02	.02	<.00
17...	<1	.21	<5	6.8	<.02	.02	<.00
24...	<1	.13	<5	7.1	<.02	.02	<.00
31...	5	.13	<5	7.1	<.02	.02	<.00
JAN							
07...	<1	.15	<5	7.1	<.02	.02	<.00
14...	<1	.12	<5	7.0	<.02	.02	<.00
21...	0	.16	<5	7.1	<.02	.02	<.00
28...	0	.15	<5	7.2	<.02	.02	.00
FEB							
04...	1	.13	<5	7.0	<.02	.01	.00
11...	<1	.10	<5	7.1	<.02	<.01	.00
18...	<1	.09	<5	7.2	<.02	.02	<.00
25...	<1	.15	<5	7.2	<.02	.02	<.00
MAR							
04...	<1	.12	<5	7.2	<.02	.02	<.00
11...	<1	.12	<5	7.2	<.02	.02	<.00
18...	0	.10	<5	7.5	<.02	.02	<.00
25...	<1	.10	<5	7.6	<.02	.02	<.00
APR							
01...	<1	.13	<5	7.7	<.02	.02	<.00
08...	<1	.10	<5	7.5	<.02	.01	<.00
15...	--	.10	<5	7.6	<.02	.01	<.00
22...	2	.41	<5	6.8	<.02	.02	<.00
MAY							
01...	<1	.20	<5	7.6	<.02	.01	<.00
08...	1	.10	<5	7.6	<.02	.01	<.00
15...	1	.19	<5	6.8	<.02	.01	<.00
22...	<1	.14	<5	7.1	<.02	.01	<.00
28...	<1	.12	<5	--	<.02	.01	<.00
JUN							
04...	6	.13	<5	7.8	<.02	.02	<.00
12...	4	.11	<5	7.8	<.02	.02	<.03
JUN							
19...	<1	.12	<5	--	<.02	.01	--
26...	4	.14	<5	8.1	<.02	.02	<.00
JUL							
03...	0	.17	<5	7.8	<.02	.03	<.00
10...	1	.11	<5	--	--	--	--
17...	10	.17	<5	--	<.02	.02	--
22...	5	.14	<5	--	--	--	--
29...	11	.12	<5	8.5	<.02	.04	<.00
AUG							
05...	4	.10	<5	--	--	--	--
12...	140	.16	<5	--	<.02	.06	--
19...	27	.15	<5	--	--	--	--
26...	1	.17	<5	--	--	--	--
SEP							
02...	1	.17	<5	8.0	<.02	.03	<.00
09...	1	.17	<5	--	--	--	--
16...	<1	.16	<5	--	<.02	.02	--
23...	2	.19	<5	--	--	--	--
30...	4	.22	<5	8.0	.02	.03	.00

14139600 CAMP CREEK NEAR BULL RUN, OR

LOCATION.--Lat 45°27'41", long 122°06'13", in SW¼SW¼ sec.20, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, Mount Hood National Forest, 15 ft (4.6 m) downstream from falls at confluence with West Branch of Camp Creek, 0.3 mi (0.5 km) upstream from Bull Run Reservoir Number Two, and 6.6 mi (10.6 km) northeast of Bull Run.

DRAINAGE AREA.--3.27 mi^2 (8.47 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	OXYGEN, DIS-SOLVED (MG/L)	PH (UNITS)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)
OCT									
01...	0915	18	9.2	18	11.2	7.1	8	2	1
08...	0915	12	9.9	18	11.4	7.1	6	2	<1
15...	1255	6.8	10.0	18	11.2	7.1	94	1	5
22...	0930	3.2	8.8	19	11.5	7.2	<1	<1	<1
29...	0940	8.9	8.8	19	11.2	7.1	18	6	4
NOV									
05...	1145	23	8.0	18	11.4	7.1	20	0	0
12...	1200	10	8.5	18	11.7	7.1	2	0	<1
14...	1330	20	7.0	18	--	7.0	--	--	--
20...	1010	16	4.1	17	--	7.1	9	<1	0
25...	1230	439	6.0	13	--	6.9	--	--	--
26...	1430	211	7.8	14	11.4	6.7	34	2	1
DEC									
03...	1200	211	8.0	15	--	6.9	44	1	0
10...	1250	45	6.9	16	12.0	7.0	3	<1	0
13...	1015	649	8.0	11	--	6.7	--	--	--
14...	1130	357	7.2	13	--	6.9	--	--	--
17...	1315	55	4.9	14	12.1	7.1	1	<1	<1
26...	1010	21	5.1	16	12.6	7.1	15	<1	<1
JAN									
01...	1050	16	3.6	16	12.6	7.0	5	1	<1
08...	0945	36	6.0	16	12.4	7.0	29	<5	<1
15...	0900	26	6.6	16	12.6	7.1	2	0	<1
21...	1200	31	7.0	15	12.5	7.2	<1	<1	0
28...	1215	18	6.0	15	12.6	7.2	--	--	--
FEB									
04...	1215	33	6.5	15	12.2	7.2	<1	<1	<1
11...	1240	21	5.1	15	12.4	7.2	<1	<1	<1
18...	1200	13	6.1	16	12.5	7.2	<1	<1	<1
25...	1215	12	6.1	16	12.0	7.2	<1	2	0
MAR									
04...	1230	14	5.0	16	12.6	7.2	<1	<1	<1
11...	1230	9.1	5.1	16	12.7	7.2	<1	0	<1
18...	1230	9.1	6.6	16	12.0	7.3	13	<1	<1
25...	1220	6.8	7.5	17	12.0	7.2	<1	<1	<1
APR									
01...	1220	--	7.0	17	12.0	7.3	<1	0	<1
08...	1145	9.1	6.0	17	12.0	7.2	--	--	--
15...	1245	5.4	7.0	17	12.0	7.1	--	--	--
22...	0940	25	6.0	16	11.6	6.9	--	--	--
MAY									
01...	0740	46	7.0	18	12.2	7.0	11	0	<1
08...	1045	10	7.5	18	11.6	7.1	11	<1	1
15...	1050	50	7.0	17	--	7.0	19	2	1
22...	1110	14	7.0	16	13.6	7.1	22	1	<1
28...	1150	11	8.0	17	--	7.1	1	0	1
JUN									
04...	1220	7.0	12.0	20	10.3	7.1	42	<1	2
12...	1045	7.0	10.0	19	--	7.1	12	<1	0
19...	1155	30	8.0	19	11.1	7.1	12	<1	1
26...	1100	6.1	9.8	19	11.2	7.2	21	0	2
JUL									
03...	1130	3.1	11.0	21	11.0	7.1	13	9	11
10...	1110	2.3	10.8	20	10.6	7.2	79	6	6
17...	1050	3.1	11.3	20	10.4	7.2	29	3	11
22...	1145	--	14.0	21	10.0	7.2	42	20	9
29...	1200	1.9	13.5	21	9.8	7.1	5	5	4
AUG									
05...	1200	1.3	13.5	22	9.8	7.2	20	2	1
12...	1310	1.3	14.0	23	10.2	7.2	50	42	53
19...	1215	7.9	11.8	19	11.2	7.2	60	6	7
26...	1215	15	10.0	18	11.0	7.2	8	12	9
SEP									
02...	1235	7.0	12.0	20	11.5	7.2	12	2	4
10...	0915	7.0	10.5	20	11.0	7.1	2	<0	--
17...	0950	12	8.9	19	11.8	7.1	4	3	4
24...	0925	12	10.2	20	12.4	7.1	10	1	5
30...	1315	9.8	11.0	21	10.6	7.1	28	8	7

14' 9600 CAMP CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TUR-BID-ITY (NTU)	COLOR (PLAT-INUM-COBALT UNITS)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)
OCT								
01...	.13	<5	8.7	<.02	.03	<.00	--	--
08...	.11	<5	9.0	<.02	.03	<.00	--	--
15...	.08	<5	9.4	<.02	.03	<.00	--	--
22...	.10	<5	9.4	<.02	.03	<.00	--	--
29...	.15	5	8.9	<.02	.03	.00	--	--
NOV								
05...	.13	<5	8.7	<.02	.02	<.00	--	--
12...	.12	<5	--	<.02	.04	<.00	--	--
14...	.23	<5	--	--	--	--	--	--
20...	.17	<5	8.5	<.02	.02	.00	--	--
25...	4.3	20	6.3	<.02	.03	<.00	--	--
26...	1.2	<5	7.1	<.02	.02	.00	--	--
DEC								
03...	1.0	5	7.0	<.02	.03	.00	--	--
10...	.18	<5	7.5	<.02	.02	<.00	--	--
13...	5.0	45	5.5	<.02	.03	<.00	--	--
14...	.51	5	6.6	<.02	.02	<.00	--	--
17...	.20	<5	7.6	<.02	.02	<.00	--	--
26...	.12	<5	7.9	<.02	.03	<.00	--	--
JAN								
01...	.09	<5	8.4	<.02	.03	<.00	--	--
08...	.15	<5	8.0	<.02	.02	<.00	--	--
15...	.12	<5	8.0	<.02	.03	.00	--	--
21...	.11	<5	8.0	<.02	.03	<.00	--	--
28...	.12	<5	--	<.02	.03	--	--	--
FEB								
04...	.12	<5	7.9	<.02	.02	<.00	--	--
11...	.09	<5	8.1	<.02	.03	<.00	--	--
18...	.10	<5	8.2	<.02	.03	<.00	--	--
25...	.11	<5	8.3	<.02	.03	<.00	--	--
MAR								
04...	.10	<5	8.1	<.02	.02	<.00	--	--
11...	.12	<5	8.3	<.02	.03	<.00	--	--
18...	.10	<5	8.5	<.02	.03	<.00	--	--
25...	.13	<5	8.6	<.02	.04	<.00	--	--
APR								
01...	.11	<5	8.7	<.02	.03	<.00	18	--
08...	.10	<5	8.3	<.02	.03	<.00	--	--
15...	.09	<5	8.6	<.02	.02	<.00	19	.28
22...	.34	<5	7.7	<.02	.04	<.00	19	1.35
MAY								
01...	.13	<5	8.2	<.02	.02	<.00	18	2.27
08...	.10	<5	8.6	<.02	.02	<.00	11	.30
15...	.26	<5	7.2	<.02	.02	<.00	18	2.47
22...	.12	<5	7.9	<.02	.02	<.00	17	.67
28...	.15	<5	8.0	<.02	.02	<.00	19	.60
JUN								
04...	.14	<5	8.5	<.02	.02	<.00	17	.34
12...	.14	<5	--	--	--	--	19	.37
19...	.10	<5	--	<.02	.01	--	21	1.76
26...	.12	<5	--	--	--	--	20	.34
JUL								
03...	.13	<5	9.2	<.02	.04	<.00	22	.19
10...	.14	<5	--	--	--	--	19	.12
17...	.14	<5	--	<.02	.02	--	19	.16
22...	.14	<5	--	--	--	--	20	--
29...	.12	<5	9.7	<.02	.04	<.00	22	.11
AUG								
05...	.13	<5	--	--	--	--	27	.10
12...	.15	<5	--	<.02	.08	--	21	.08
19...	.19	<5	--	--	--	--	21	.45
26...	.13	<5	--	--	--	--	21	.90
SEP								
02...	.12	<5	9.0	<.02	.03	<.00	21	.42
10...	.17	<5	--	--	--	--	21	.41
17...	.24	<5	--	<.02	.04	--	22	.78
24...	.16	<5	--	--	--	--	22	.78
30...	.20	<5	9.1	<.02	.05	.00	20	.55

14139700 CEDAR CREEK NEAR BRIGHTWOOD, OR

LOCATION.--Lat 45°27'30", long 122°01'50", in NE¼ sec.26, T.1 S., R.6 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 5.8 mi (9.3 km) north of Brightwood and at mile 2.5 (4.0 km).

DRAINAGE AREA.--7.93 mi² (20.54 km²).

PERIOD OF RECORD.--July to November 1964, June 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,960 ft (597 m), from topographic map.

REMARKS.--Records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--13 years, 69.7 ft³/s (1.974 m³/s), 119.36 in/yr (3,032 mm/yr), 50,500 acre-ft/yr (62.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,990 ft³/s (56.4 m³/s) Dec. 22, 1964, gage height, 7.20 ft (2.195 m), from rating curve extended above 320 ft³/s (9.06 m³/s) on basis of slope-area measurement of peak flow; minimum, 7.1 ft³/s (0.20 m³/s) Aug. 29 to Sept. 3, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	2330	1,490	42.2	5.53	1.686	Dec. 11	1030	586	16.6	3.62	1.103
Dec. 2	1530	*1,510	42.8	*5.57	1.698	Dec. 13	1030	1,360	38.5	5.18	1.579
Dec. 6	2100	576	16.3	3.60	1.097						

Minimum, 10 ft³/s (0.28 m³/s) Aug. 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	204	242	48	113	62	30	58	31	19	12	24
2	46	233	1020	46	197	53	38	49	29	19	12	22
3	38	121	534	79	144	47	42	42	27	21	12	21
4	32	78	324	92	107	43	43	44	25	22	12	22
5	29	62	172	101	95	40	57	42	24	20	12	27
6	30	53	381	115	99	37	47	38	22	19	12	25
7	31	83	295	113	97	41	41	34	22	18	11	22
8	34	60	147	152	92	48	38	31	20	17	11	25
9	[illegible]2	49	97	135	83	39	35	30	30	16	11	30
10	[illegible]6	43	170	117	68	36	33	34	57	16	11	53
11	31	38	419	92	60	37	30	74	60	16	11	60
12	27	35	314	115	52	37	29	56	40	15	17	46
13	27	81	960	90	47	43	28	84	42	15	22	42
14	24	193	529	79	47	41	30	167	54	14	15	40
15	22	295	286	70	47	37	30	139	68	16	71	38
16	20	154	164	71	42	36	39	103	52	33	53	35
17	19	95	130	103	47	36	42	76	43	22	41	83
18	18	70	99	103	48	35	44	60	37	19	31	128
19	17	56	76	113	47	33	44	49	34	18	33	74
20	16	44	62	99	46	32	50	42	30	17	48	56
21	16	38	54	117	43	30	67	38	28	16	43	47
22	15	38	49	111	41	30	109	37	27	15	44	42
23	20	86	53	83	40	47	88	34	25	15	43	39
24	30	208	101	68	44	48	70	35	24	14	62	31
25	46	882	107	64	78	44	67	34	27	14	57	28
26	47	608	83	71	162	38	135	35	24	15	46	24
27	32	264	68	58	101	35	164	58	22	14	37	24
28	29	255	61	58	76	33	142	53	21	14	32	22
29	57	370	62	56	---	31	95	42	20	13	28	20
30	144	170	65	48	---	33	73	38	20	13	26	20
31	167	---	58	64	---	31	---	34	---	13	26	---
TOTAL	1269	4966	7182	2731	2163	1213	1780	1690	985	528	902	1170
MEAN	40.9	166	232	88.1	77.3	39.1	59.3	54.5	32.8	17.0	29.1	39.0
MAX	167	882	1020	152	197	62	164	167	68	33	71	128
MIN	15	35	49	46	40	30	28	30	20	13	11	20
CFSM	5.16	20.9	29.3	11.1	9.75	4.93	7.48	6.87	4.14	2.14	3.67	4.92
IN.	5.95	23.29	33.69	12.81	10.15	5.69	8.35	7.93	4.62	2.48	4.23	5.49
AC-FT	2520	9850	14250	5420	4290	2410	3530	3350	1950	1050	1790	2320

CAL YR 1977 TOTAL 26571.7 MEAN 72.8 MAX 1020 MIN 9.5 CFSM 9.18 IN 124.63 AC-FT 52700
WTR YR 1978 TOTAL 26579.0 MEAN 72.8 MAX 1020 MIN 11 CFSM 9.18 IN 124.67 AC-FT 52720

14139800 SOUTH FORK BULL RUN RIVER NEAR BULL RUN, OR

LOCATION.--Lat 45°26'38", long 122°06'20", in NE¼NE¼ sec.31, T.1 S., R.6 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 6.2 mi (10.0 km) northeast of Bull Run, and at mile 0.6 (1.0 km).

DRAINAGE AREA.--15.4 mi^2 (39.9 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 990 ft (302 m) from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,520 ft^3/s (71.4 m^3/s) Dec. 2, 1977, gage height, 8.32 ft (2.536 m); minimum, 10 ft^3/s (0.28 m^3/s) Aug. 18, 19, 23, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft^3/s (45.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2130	1,900	53.8	7.60	2.316	Dec. 13	1030	2,230	63.2	8.00	2.438
Dec. 2	1530	*2,520	71.4	*8.32	2.536						

Minimum, 12 ft^3/s (0.34 m^3/s) Aug. 9-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	294	315	93	183	135	47	125	54	28	17	41
2	102	359	1420	85	306	112	60	103	49	28	16	36
3	84	236	820	120	259	96	72	85	44	30	16	34
4	70	158	540	158	203	86	73	83	41	32	15	34
5	59	127	341	168	176	77	100	79	38	30	14	40
6	57	106	533	212	171	70	89	70	35	27	14	39
7	124	132	487	220	166	72	80	62	32	26	14	34
8	103	103	296	266	163	83	72	55	29	25	13	37
9	80	91	212	236	155	69	65	53	39	24	12	48
10	66	81	296	214	141	64	60	55	78	23	12	78
11	58	71	588	183	124	66	54	110	91	23	12	108
12	51	63	517	203	102	66	48	99	66	22	22	92
13	47	119	1540	176	91	75	47	142	70	21	35	83
14	42	234	824	164	66	74	49	277	85	20	21	78
15	38	376	609	147	87	69	49	259	120	23	111	72
16	35	251	308	145	77	66	64	203	99	61	106	65
17	32	169	253	186	84	66	71	163	83	40	85	115
18	30	130	190	194	86	64	79	132	72	36	66	212
19	29	103	152	228	87	59	83	107	64	34	63	150
20	28	86	128	201	88	56	97	88	55	32	86	117
21	27	74	110	212	85	53	123	75	48	30	91	99
22	26	70	95	220	80	49	188	66	44	27	89	84
23	32	132	91	161	76	72	195	61	41	26	89	76
24	41	315	155	144	80	78	159	61	38	25	115	63
25	71	1260	194	131	130	73	141	55	42	23	116	55
26	79	855	161	145	282	65	206	54	38	23	101	48
27	59	390	132	117	216	60	294	92	35	23	81	46
28	53	359	115	115	166	56	289	91	32	21	67	41
29	93	484	113	108	---	53	206	79	29	20	56	38
30	201	282	116	96	---	55	158	71	30	19	47	38
31	266	---	107	112	---	52	---	62	---	17	46	---
TOTAL	2204	7510	11758	5160	3950	2191	3318	3117	1621	839	1648	2101
MEAN	71.1	250	379	166	141	70.7	111	101	54.0	27.1	53.2	70.0
MAX	266	1260	1540	266	306	135	294	277	120	61	116	212
MIN	26	63	91	85	76	49	47	53	29	17	12	34
CFSM	4.62	16.2	24.6	10.8	9.16	4.59	7.21	6.56	3.51	1.76	3.46	4.55
IN.	5.32	18.14	28.40	12.46	9.54	5.29	8.01	7.53	3.92	2.03	3.98	5.07
AC-FT	4370	14900	23320	10230	7830	4350	6580	6180	3220	1660	3270	4170

CAL YR 1977 TOTAL 45582 MEAN 125 MAX 1540 MIN 10 CFSM 8.12 IN 110.10 AC-FT 90410
WTR YR 1978 TOTAL 45417 MEAN 124 MAX 1540 MIN 12 CFSM 8.05 IN 109.70 AC-FT 90080

14139800 SOUTH FORK BULL RUN RIVER NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	OXYGEN, DIS-SOLVED (MG/L)	PH (UNITS)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)
OCT									
01...	1020	121	8.9	21	11.5	7.1	2	0	1
05...	1235	128	7.1	20	11.6	7.1	8	1	<1
08...	0950	101	9.2	20	11.4	7.2	2	0	3
15...	1320	39	9.0	23	11.4	7.3	86	<1	<1
20...	1100	91	2.0	20	--	7.1	29	0	<1
22...	1015	24	8.0	27	11.7	7.3	1	<1	<1
29...	1040	101	8.0	23	11.6	7.1	18	2	1
NOV									
12...	1300	61	7.5	22	12.0	7.1	6	2	1
14...	1415	370	6.0	18	--	6.9	--	--	--
20...	1100	91	2.0	20	--	7.1	29	0	<1
25...	1245	1470	6.0	12	--	7.0	--	--	--
26...	1445	769	6.6	13	11.8	6.6	16	5	1
27...	1100	404	5.6	16	--	6.9	--	--	--
DEC									
02...	1215	1540	7.5	--	--	--	--	--	--
03...	1430	769	7.2	14	--	6.9	37	55	<1
10...	1340	333	5.0	16	12.6	7.0	3	1	<1
13...	1120	2320	--	11	--	6.7	--	--	--
14...	1155	980	7.0	13	--	6.9	--	--	--
17...	1415	253	4.5	16	12.6	7.1	1	<1	<1
26...	1050	163	3.9	18	13.0	7.1	25	1	<1
JAN									
01...	0945	85	2.0	21	13.2	7.0	3	1	<1
08...	1020	262	4.9	18	12.5	7.1	13	0	<1
15...	1020	141	5.2	21	13.0	7.2	2	1	<1
21...	1240	224	6.0	18	12.5	7.2	1	1	<1
28...	1305	90	5.1	20	12.8	7.3	1	0	<1
FEB									
04...	1300	186	5.6	17	12.2	7.2	3	<1	<1
11...	1315	92	4.2	20	12.6	7.2	<1	<1	<1
18...	1300	72	5.1	22	12.8	7.3	<1	<1	<1
25...	1245	103	5.8	20	12.4	7.3	1	0	<1
MAR									
04...	1335	80	3.7	20	12.8	7.3	<1	<1	<1
11...	1340	55	4.5	22	13.0	7.3	<1	--	--
18...	1325	51	5.2	23	12.3	7.4	11	<1	<1
25...	1320	63	7.0	22	12.2	7.4	<1	<1	<1
APR									
01...	1335	39	7.1	25	12.0	7.4	<1	<1	<1
08...	1245	59	6.0	21	12.0	7.2	<1	0	<1
15...	1335	39	6.5	24	12.2	7.3	<1	<1	<1
22...	1000	190	6.0	19	12.0	7.0	15	5	0
MAY									
01...	0840	188	6.0	21	12.2	7.1	13	2	<1
08...	1200	48	8.5	24	--	7.2	10	<1	1
MAY									
15...	1150	273	7.0	18	--	7.1	40	2	0
22...	1215	59	7.8	21	--	7.3	26	<1	0
28...	1300	83	8.0	21	--	7.2	3	1	1
JUN									
04...	1320	39	13.5	26	--	7.3	32	1	3
12...	1220	64	10.0	23	10.4	7.2	22	6	1
19...	1230	51	10.8	23	10.8	7.3	26	2	2
26...	1220	33	11.0	26	6.5	7.4	20	1	1
JUL									
03...	1245	26	11.0	29	11.6	7.4	8	6	8
10...	1235	20	11.8	30	--	7.4	23	5	3
17...	1205	37	12.0	28	--	7.4	18	6	6
22...	1250	25	15.6	29	10.0	7.4	4	5	3
AUG									
05...	1300	12	15.2	31	9.7	7.5	6	1	0
12...	1415	19	14.0	35	10.0	7.5	62	38	41
19...	1320	54	11.8	24	10.0	7.3	80	12	6
26...	1330	81	10.0	22	10.7	7.2	12	4	3
SEP									
02...	1350	35	12.0	27	13.0	7.4	16	2	<1
10...	1130	54	10.0	26	11.8	7.3	14	2	10
17...	0910	76	8.5	24	13.4	7.2	6	2	6
24...	1100	54	10.0	24	11.5	7.2	20	6	2
30...	1330	54	10.0	27	10.8	7.2	28	14	6

14139800 SOUTH FORK BULL RUN RIVER NEAR BULL RUN, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TUR-BID-ITY (NTU)	COLOR (PLAT-INUM-COBALT UNITS)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)
OCT								
01...	.17	5	9.5	<.02	.02	<.00	--	--
05...	.20	<5	9.3	<.02	.02	.00	--	--
08...	.18	5	9.6	<.02	.02	<.00	--	--
15...	.16	<5	11	<.02	.02	.00	--	--
20...	.17	<5	9.5	<.02	.02	.00	--	--
22...	.12	<5	12	<.02	.02	.00	--	--
29...	.24	10	10	<.02	.03	<.00	--	--
NOV								
12...	.15	<5	10	<.02	.02	.00	--	--
14...	1.2	40	--	--	--	--	--	--
20...	.17	<5	9.5	<.02	.02	.00	--	--
25...	7.5	25	5.4	<.02	.03	<.00	--	--
26...	3.0	15	6.8	<.02	.02	.00	--	--
27...	.68	10	--	--	--	--	--	--
DEC								
02...	12	--	--	--	--	--	--	--
03...	1.7	10	7.0	<.02	.03	<.00	--	--
10...	4.6	5	7.5	<.02	.03	.00	--	--
13...	6.5	50	4.8	<.02	.03	.00	--	--
14...	1.9	10	6.3	<.02	.01	.00	--	--
17...	.36	<5	8.5	<.02	.02	<.00	--	--
26...	.20	<5	9.0	<.02	.02	<.00	--	--
JAN								
01...	.20	<5	10	<.02	.02	<.00	--	--
08...	.34	<5	8.7	<.02	.03	.00	--	--
15...	.20	<5	9.6	<.02	.03	.00	--	--
21...	.23	<5	8.6	<.02	.02	<.00	--	--
28...	.16	<5	10	<.02	.02	<.00	--	--
FEB								
04...	.20	<5	8.5	<.02	.02	.00	--	--
11...	.15	<5	9.6	<.02	.01	.00	--	--
18...	.17	<5	10	<.02	.01	<.00	--	--
25...	.22	5	9.9	<.02	.02	.00	--	--
MAR								
04...	.13	<5	10	<.02	.01	.00	--	--
11...	.13	<5	10	<.02	.01	<.00	--	--
18...	.14	<5	11	<.02	.01	<.00	--	--
25...	.16	<5	10	<.02	.02	<.00	--	--
APR								
01...	.13	<5	12	<.02	.01	.00	--	--
08...	.13	<5	10	<.02	.01	.00	--	--
15...	.15	<5	11	<.02	.02	.00	26	2.82
22...	.35	<5	8.3	<.02	.03	.01	22	11.4
MAY								
01...	.20	<5	9.2	<.02	.01	.00	21	10.8
08...	.15	<5	--	<.02	.01	<.00	24	3.23
MAY								
15...	.26	<5	7.3	<.02	.02	<.00	19	14.7
22...	.17	<5	9.4	<.02	.01	.00	22	3.54
28...	.20	5	9.1	<.02	.02	.00	24	5.64
JUN								
04...	.17	<5	10	<.02	.01	<.00	23	2.45
12...	.20	<5	--	--	--	--	23	4.11
19...	.14	<5	--	<.02	.01	--	25	3.61
26...	.15	<5	--	--	--	--	27	2.45
JUL								
03...	.13	<5	11	<.02	.02	<.00	30	2.16
10...	.13	<5	--	--	--	--	28	1.57
17...	.16	5	--	<.02	.02	--	26	2.66
22...	.14	<5	--	--	--	--	26	1.87
AUG								
05...	.11	<5	--	--	--	--	37	1.26
12...	.15	<5	--	<.02	.03	--	30	1.54
19...	.17	<5	--	--	--	--	26	3.83
26...	.17	5	--	--	--	--	25	5.61
SEP								
02...	.12	<5	10	<.02	.02	<.00	27	2.65
10...	.20	5	--	--	--	--	27	4.06
17...	.21	5	--	<.02	.03	--	26	5.56
24...	.20	<5	--	--	--	--	27	4.05
30...	.19	<5	11	<.02	.03	<.00	26	3.81

14139900 BULL RUN RESERVOIR NUMBER TWO NEAR BULL RUN, OR

LOCATION.--Lat 45°26'55", long 122°08'45", on line between secs.25 and 26, T.1 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on south tower 0.3 mi (0.5 km) above headworks dam on Bull Run River, 4.4 mi (7.1 km) northeast of Bull Run, and at mile 6.5 (10.5 km).

DRAINAGE AREA.--102 mi^2 (264 km^2).

PERIOD OF RECORD.--December 1961 to current year. Prior to October 1975, monthend contents only.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Portland Water Bureau). Prior to Dec. 31, 1975, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earth and rockfill dam with concrete spillway built by Portland Water Bureau. Storage began about Dec. 20, 1961; first filling occurred Dec. 24, 1961. Capacity, 20,990 acre-ft (25.8 hm^3) at crest of spillway, elevation, 860.0 ft (262.13 m). Dead storage negligible. Water is used for power generation by Portland General Electric Co. and municipal supply for city of Portland.

COOPERATION.--Capacity table furnished by Portland Water Bureau.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 23,660 acre-ft (29.2 hm^3) Dec. 22, 1964, elevation, 866.00 ft (263.957 m); no contents at times during low-flow periods.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 23,310 acre-ft (28.7 hm^3) Dec. 2, elevation, 865.24 ft (263.725 m); minimum, 13,010 acre-ft (16.0 hm^3) Jan. 3, elevation, 839.15 ft (255.773 m).

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	860.43	861.48	861.88	841.67	860.50	860.36	859.52	860.46	860.70	853.51	851.90	852.23
2	860.40	861.28	863.86	840.25	861.09	860.17	859.74	860.09	860.20	853.20	852.17	851.91
3	860.16	860.71	862.25	840.86	860.88	860.23	859.97	860.26	860.10	853.40	852.41	851.49
4	860.08	860.51	861.53	842.41	860.65	860.17	859.97	860.26	860.20	854.14	852.44	851.24
5	860.06	860.39	861.12	843.40	860.61	860.08	860.11	860.20	860.00	854.03	852.59	850.94
6	860.09	860.31	862.47	846.13	860.60	860.13	860.31	860.20	859.80	853.62	852.66	850.26
7	860.20	860.49	861.42	848.00	860.62	860.18	860.13	859.90	859.30	853.30	852.55	850.06
8	860.22	860.37	860.97	851.00	860.56	860.22	860.10	859.99	859.50	853.18	852.15	850.02
9	860.28	860.30	860.73	854.00	860.48	860.15	860.10	860.10	859.70	853.03	851.79	850.16
10	860.29	860.23	861.20	856.27	860.39	860.11	859.98	860.11	860.00	852.97	851.67	850.55
11	860.25	860.16	862.30	857.23	860.30	860.11	859.95	860.42	860.50	852.73	851.85	851.07
12	860.23	860.16	861.77	859.47	860.35	860.11	859.94	860.30	860.04	852.50	852.42	852.31
13	860.22	860.56	863.49	860.57	860.22	860.12	859.92	860.62	859.99	851.84	853.12	853.22
14	859.98	861.47	862.21	860.49	860.19	860.11	859.92	861.10	859.98	851.62	853.22	853.90
15	859.78	861.48	861.49	860.39	860.17	860.19	859.95	860.82	860.35	852.30	853.40	854.44
16	859.56	860.90	861.02	860.30	860.15	860.04	859.98	860.59	860.12	852.70	853.27	854.82
17	859.90	860.63	860.88	860.63	860.15	860.04	860.00	860.50	859.82	852.56	852.89	855.78
18	859.93	860.47	860.72	860.72	860.17	860.03	860.28	860.41	859.29	852.36	852.47	858.44
19	859.81	860.35	860.57	860.62	860.23	860.01	860.29	860.26	859.17	852.22	852.10	859.68
20	859.73	860.28	860.20	860.78	860.24	859.69	860.35	860.25	858.03	851.90	851.86	860.39
21	859.64	860.24	859.01	860.80	860.22	859.69	860.39	860.23	856.30	851.77	851.44	860.63
22	859.41	860.27	856.37	860.71	860.25	859.63	860.73	860.08	854.64	850.64	851.43	860.19
23	859.19	860.73	854.05	860.50	860.30	859.59	860.59	859.98	854.29	850.32	851.65	858.94
24	858.97	861.47	853.65	860.49	860.30	859.54	860.46	860.17	854.44	849.85	852.10	856.90
25	859.03	863.89	854.53	860.45	860.80	859.48	860.47	860.10	854.56	849.59	852.56	854.44
26	859.24	861.71	854.40	860.35	860.85	858.07	860.92	860.15	854.45	849.13	852.89	852.80
27	859.40	861.64	853.19	860.31	860.65	859.24	860.98	860.21	854.06	849.61	853.10	852.14
28	859.58	861.28	851.21	860.31	860.46	859.10	860.80	860.28	853.68	850.33	853.32	852.24
29	860.01	861.61	849.01	860.27	---	859.11	860.61	860.31	853.39	850.93	853.25	852.26
30	860.38	861.03	846.80	860.17	---	859.25	860.57	860.60	854.02	851.41	852.90	852.15
31	861.04	---	844.18	860.11	---	859.40	---	860.75	---	851.70	852.60	---
MEAN	859.92	860.88	858.34	855.80	860.44	859.82	860.23	860.31	858.02	852.01	852.46	853.85
MAX	861.04	863.89	863.86	860.80	861.09	860.36	860.98	861.10	860.70	854.14	853.40	860.63
MIN	858.97	860.16	844.18	840.25	860.15	858.07	859.52	859.90	853.39	849.13	851.43	850.02
(†)	21,460	21,450	14,720	21,050	21,200	20,740	21,250	21,330	18,410	17,480	17,840	17,660
(‡)	+310	-10	-6,730	+6,330	+150	-460	+510	+80	-2,920	-930	+360	-180

CAL YR 1977 MEAN 859.89 MAX 863.89 MIN 844.18 AC-FT‡ -6,280
WTR YR 1978 MEAN 857.64 MAX 863.89 MIN 840.25 AC-FT‡ -3,490

† Contents, in acre-feet, at 2400, on last day of month.
‡ Change in contents, in acre-feet.

14140001 BULL RUN RIVER NEAR BULL RUN, OR

LOCATION.--Lat 45°26'15", long 122°10'40", in NE¼SW¼ sec.34, T.1 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on left bank 1.8 mi (2.9 km) downstream from Bull Run Reservoir Number Two, 2.7 mi (4.3 km) northeast of Bull Run, and at mile 4.7 (7.6 km).

DRAINAGE AREA.--107 mi^2 (277 km^2).

PERIOD OF RECORD.--September 1907 to current year. Records for January 1895 to August 1907, published in WSP 370, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1288: 1910-11, 1913, 1920-23, 1926, 1929. WSP 1318: 1919(M). WSP 1568: 1952. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 567.90 ft (173.096 m) National Geodetic Vertical Datum of 1929 (levels by Portland Water Bureau). Prior to July 27, 1909, nonrecording gage at site 1.5 mi (2.4 km) upstream at different datum. July 27, 1909, to Sept. 30, 1959, water-stage recorder at site 2.5 mi (4.0 km) upstream at different datums.

REMARKS.--Records excellent. Water stored since 1915 in Bull Run Lake, capacity, 12,270 acre-ft (15.1 hm^3), and since 1958 in North Fork Reservoir, capacity, 1,030 acre-ft (1.27 hm^3). Flow regulated since 1929 by Bull Run Reservoir Number One (see station 14139000), and since 1961 by Bull Run Reservoir Number Two (see station 14139900). All records given herein include flow diverted from Bull Run Reservoir Number Two for city of Portland, and that used by Portland General Electric Co. for power generation, which returns to Bull Run River below station. Total diversion, 204,700 acre-ft (252 hm^3) of which 85,430 acre-ft (105 hm^3) was used for power generation and returned to Bull Run River.

COOPERATION.--Records of daily diversion furnished by Portland Water Bureau.

AVERAGE DISCHARGE.--71 years, 778 ft^3/s (22.03 m^3/s), 98.74 in/yr (2,508 mm/yr), 563,700 acre-ft/yr (695 hm^3/yr), adjusted for storage in Bull Run Reservoir Number One since 1929 and Bull Run Reservoir Number Two since 1961.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 24,800 ft^3/s (702 m^3/s) Dec. 22, 1964, gage height, 17.21 ft (5.246 m), from rating curve extended above 8,800 ft^3/s (249 m^3/s) on basis of computation of peak flow over dam; minimum, 1.1 ft^3/s (0.03 m^3/s) Oct. 4, 1974.

Combined flow, maximum discharge, 25,100 ft^3/s (711 m^3/s) Dec. 22, 1964; minimum daily, 63 ft^3/s (1.78 m^3/s) Aug. 13-16, 1926.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 19,700 ft^3/s (558 m^3/s) Dec. 2, gage height, 15.68 ft (4.779 m); minimum, 5.0 ft^3/s (0.142 m^3/s) Aug. 11.

Combined flow, maximum discharge, 20,000 ft^3/s (566 m^3/s) Dec. 2; minimum daily, 138 ft^3/s (3.91 m^3/s) Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	736	2600	2370	955	745	814	334	724	467	269	276	349
2	701	4070	12600	754	1590	665	333	539	400	236	265	360
3	607	1920	7360	532	1830	568	337	517	281	203	251	358
4	429	1220	4470	697	1350	514	392	578	345	201	284	323
5	384	948	2630	815	1100	453	402	562	334	204	262	349
6	394	787	4220	777	1160	452	576	502	281	264	260	362
7	480	972	4500	771	1120	434	661	445	258	264	263	351
8	531	920	2310	781	1120	569	452	291	247	246	332	360
9	529	772	1530	790	1040	501	414	376	285	225	345	348
10	600	654	1900	832	904	453	402	421	369	216	323	252
11	581	586	5090	847	790	445	359	657	652	235	280	345
12	542	545	4600	718	700	464	341	720	647	230	224	348
13	538	800	11500	835	613	444	343	765	491	281	138	355
14	473	2080	7560	1010	561	447	344	1850	493	288	172	357
15	346	3770	4400	890	558	433	341	1860	635	262	211	353
16	333	2320	2350	755	505	411	359	1340	707	196	186	353
17	334	1470	1840	853	499	406	363	1040	527	186	157	363
18	342	1110	1450	1060	509	402	476	845	490	199	172	351
19	328	892	1130	1150	538	400	559	690	480	209	184	364
20	340	741	996	1340	544	372	606	595	560	248	168	622
21	331	630	1030	1280	539	344	680	575	657	268	164	1490
22	328	586	1240	1380	520	336	891	470	611	272	281	1170
23	330	773	1140	1020	503	337	1200	394	403	272	291	827
24	330	2070	1130	934	518	342	903	387	287	247	295	875
25	338	9760	1130	831	681	343	821	488	286	267	289	743
26	331	7340	1130	843	1500	329	1140	460	291	281	294	476
27	336	3260	1120	767	1310	334	1910	512	346	237	293	367
28	331	3260	1120	707	990	336	1620	684	364	221	292	357
29	336	4400	1110	700	---	337	1210	451	306	246	296	350
30	575	2630	1100	618	---	319	1020	714	249	247	354	360
31	1550	---	1080	495	---	315	---	375	---	273	381	---
TOTAL	14664	63886	97136	26737	24337	13319	19789	20827	12749	7493	7983	14238
MEAN	473	2130	3133	862	869	430	660	672	425	242	258	475
MAX	1550	9760	12600	1380	1830	814	1910	1860	707	288	381	1490
MIN	328	545	996	495	499	315	333	291	247	186	138	252
AC-FT	29090	126700	192700	53030	48270	26420	39250	41310	25290	14860	15830	28240
MEAN†	500	2,084	3,016	971	868	462	669	685	374	191	295	424
CFSM†	4.67	19.5	28.2	9.07	8.11	4.32	6.25	6.40	3.50	1.79	2.76	3.96
IN.†	5.39	21.73	32.50	10.47	8.45	4.98	6.98	7.38	3.90	2.06	3.17	4.42
AC-FT†	30,730	124,000	185,440	59,730	48,190	28,400	39,830	42,090	22,260	11,760	18,110	25,240

CAL YR 1977 TOTAL 332,565 MEAN 911 MAX 12,600 MIN 129 AC-FT 659,600 MEAN† 902 CFSM† 8.43 IN.† 114.49 AC-FT† 653,210
WTR YR 1978 TOTAL 323,158 MEAN 885 MAX 12,600 MIN 138 AC-FT 641,000 MEAN† 878 CFSM† 8.21 IN.† 111.44 AC-FT† 635,790

† Adjusted for change in contents in Bull Run Reservoir Number One and Bull Run Reservoir Number Two.

14141500 LITTLE SANDY RIVER NEAR BULL RUN, OR

LOCATION.--Lat 45°24'55", long 122°10'20", in NW¼NW¼ sec.10, T.2 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on left bank 0.25 mi (0.40 km) upstream from Portland General Electric Co. dam and tunnel from Sandy River, 3.0 mi (4.8 km) east of Bull Run, and at mile 1.95 (3.14 km).

DRAINAGE AREA.--22.3 mi² (57.8 km²).

PERIOD OF RECORD.--May to July 1911, October 1911 to March 1912, June 1912 to April 1913, July 1919 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1154: 1949. WSP 1248: Drainage area. WSP 1288: 1912, 1920-21(M), 1922-23, 1931, 1945. WSP 1318: 1920.

GAGE.--Water-stage recorder. Altitude of gage is 720 ft (220 m), from topographic map. May 23, 1911, to Apr. 29, 1913, nonrecording gage at site 0.85 mi (1.37 km) downstream at different datum, 0.5 mi (0.8 km) downstream from Sandy River diversion tunnel. July 1, 1919, to Sept. 30, 1931, water-stage recorder at site 0.1 mi (0.2 km) downstream at different datum. Oct. 1, 1931, to Nov. 3, 1967, at site 0.1 mi (0.2 km) downstream at datum 712 ft (217 m) National Geodetic Vertical Datum of 1929. Nov. 4, 1967, to Aug. 8, 1971, water-stage recorder at site 0.1 mi (0.2 km) downstream at datum 697.44 ft (212.580 m) National Geodetic Vertical Datum of 1929 (Portland General Electric Co. bench mark).

REMARKS.--Records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--59 years (water years 1920-78), 147 ft³/s (4.163 m³/s), 89.52 in/yr (2,274 mm/yr), 106,500 acre-ft/yr (131 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,320 ft³/s (151 m³/s) Nov. 20, 1921, gage height, 9.18 ft (2.798 m), site and datum then in use, from rating curve extended above 2,200 ft³/s (62.3 m³/s); minimum, 8 ft³/s (0.23 m³/s) Aug. 20, Sept. 16, 17, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft³/s (39.6 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	2100	*3,340	94.6	*6.05	1.844	Dec. 13	1100	3,060	86.7	5.89	1.795
Dec. 2	1630	3,060	86.7	5.89	1.795						

Minimum, 17 ft³/s (0.48 m³/s) Aug. 8-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	400	571	97	160	137	53	142	70	36	23	48
2	105	500	1690	95	273	113	61	120	64	39	22	43
3	85	250	917	132	262	101	72	105	58	44	21	42
4	69	140	717	176	206	95	70	107	54	48	21	42
5	58	113	422	165	176	87	82	103	50	41	20	50
6	55	96	751	221	171	78	78	97	47	37	19	53
7	165	147	611	209	163	82	70	85	44	34	18	45
8	115	109	353	280	152	91	66	77	40	33	18	47
9	87	92	258	255	142	78	61	73	44	32	18	60
10	72	85	389	238	122	72	58	82	89	32	17	80
11	60	74	857	188	111	78	56	142	120	31	18	132
12	54	67	617	221	101	75	52	120	72	30	28	105
13	50	126	2030	188	93	90	50	160	75	28	47	91
14	45	331	1160	174	89	88	56	315	89	26	30	89
15	41	535	679	152	93	86	58	307	137	31	150	82
16	39	269	422	150	82	84	72	251	105	107	134	73
17	37	173	336	203	87	85	73	194	85	63	103	120
18	35	135	265	200	97	87	89	152	75	50	70	241
19	33	109	215	273	101	80	91	122	72	45	67	142
20	32	90	179	212	101	75	99	105	61	41	93	107
21	30	78	155	215	95	70	111	93	56	36	99	95
22	28	80	139	206	89	66	158	87	53	33	101	62
23	37	130	130	168	83	80	171	82	52	32	105	75
24	47	445	200	144	89	89	152	85	49	30	122	64
25	87	2150	241	134	144	80	147	82	60	28	118	57
26	90	1190	176	158	315	70	315	80	53	29	97	52
27	63	582	144	127	231	64	478	127	45	29	78	52
28	54	515	127	127	171	60	384	132	41	27	67	48
29	80	799	127	122	---	57	248	103	39	25	58	43
30	250	403	130	107	---	60	182	89	40	30	52	45
31	350	---	116	109	---	57	---	78	---	24	52	---
TOTAL	2492	10213	15124	5446	3999	2515	3713	3897	1939	1151	1886	2305
MEAN	80.4	340	488	176	143	81.1	124	126	64.6	37.1	60.8	76.8
MAX	350	2150	2030	280	315	137	478	315	137	107	150	241
MIN	28	67	116	95	82	57	50	73	39	24	17	42
CFSM	3.61	15.2	21.9	7.89	6.41	3.64	5.56	5.65	2.90	1.66	2.73	3.44
IN.	4.16	17.04	25.23	9.08	6.67	4.20	6.19	6.50	3.23	1.92	3.15	3.84
AC-FT	4940	20260	30000	10800	7930	4990	7360	7730	3850	2280	3740	4570

CAL YR 1977 TOTAL 56497 MEAN 155 MAX 2150 MIN 12 CFSM 6.95 IN 94.24 AC-FT 112100
WTR YR 1978 TOTAL 54680 MEAN 150 MAX 2150 MIN 17 CFSM 6.73 IN 91.21 AC-FT 108500

14144700 COLUMBIA RIVER AT VANCOUVER, WA

LOCATION.--Lat 45°37'15", long 122°40'20", in NE¼NW¼ sec.34, T.2 N., R.1 E., Clark County, Hydrologic Unit 17080001, temperature recorder near right bank, in control house of Interstate Highway 5 bridge, at south edge of Vancouver, 5.0 mi (8.0 km) upstream from Willamette River, and at mile 106.5 (171.4 km).

DRAINAGE AREA.--241,000 mi² (624,200 km²).

PERIOD OF RECORD.--Water years 1964-70, 1973 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1967 to September 1970, October 1972 to current year.
SUSPENDED SEDIMENT DISCHARGE: October 1963 to September 1967.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 23.5°C Aug. 12-15, 17, 18, 1977; minimum, 0.5°C Jan. 28, 1969.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 22.5°C Aug. 8-11; minimum, 1.0°C Jan. 3.

TEMPFRATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	16.5	---	---	8.0	8.0	3.5	2.5	4.0	4.0	5.0	4.5
2	17.0	16.5	13.0	12.0	9.0	8.0	2.5	1.5	4.5	4.0	5.0	4.5
3	17.0	16.5	12.0	12.0	9.0	8.5	1.5	1.0	4.5	4.5	4.5	4.0
4	16.5	16.0	12.0	11.5	8.5	8.0	2.0	1.5	5.0	4.5	4.5	4.0
5	15.5	15.0	12.0	11.5	8.0	7.5	2.5	2.0	5.0	5.0	4.5	4.0
6	15.5	15.0	12.5	11.5	7.5	7.5	3.0	2.5	5.0	5.0	4.5	4.5
7	16.0	15.5	12.5	12.0	7.5	7.5	3.0	3.0	5.0	5.0	5.0	5.0
8	16.0	15.5	12.0	12.0	7.0	7.0	3.5	3.0	5.0	5.0	5.5	5.0
9	---	---	11.5	11.5	7.0	6.5	3.5	3.0	5.0	5.0	5.5	5.0
10	---	---	12.0	11.5	7.0	6.5	3.5	3.5	5.0	4.5	5.5	5.0
11	---	---	12.0	11.5	7.0	6.5	3.5	3.0	4.5	4.5	5.5	5.5
12	---	---	11.5	11.5	7.5	7.0	3.5	3.0	4.5	4.0	5.5	5.0
13	---	---	11.5	11.5	8.0	7.5	3.5	3.0	4.0	4.0	5.5	5.5
14	---	---	11.5	11.5	8.0	8.0	3.0	3.0	4.0	4.0	5.5	5.5
15	---	---	11.5	11.0	8.0	7.5	3.5	3.0	4.0	4.0	6.0	5.0
16	---	---	11.0	10.5	7.5	7.5	3.5	3.5	4.0	4.0	6.0	5.5
17	---	---	10.5	10.0	7.5	7.0	3.5	3.5	4.0	4.0	6.5	5.5
18	---	---	10.0	10.0	7.0	7.0	3.5	3.5	4.5	4.0	6.5	6.0
19	---	---	9.5	9.5	6.5	6.5	4.0	3.5	5.0	4.5	7.0	6.0
20	---	---	9.5	8.0	6.5	5.5	4.0	4.0	5.0	5.0	7.0	6.5
21	---	---	8.0	7.0	5.5	5.5	4.5	4.0	5.0	5.0	7.0	6.5
22	---	---	7.0	6.5	5.5	5.0	4.0	4.0	5.0	5.0	7.0	6.5
23	---	---	7.0	6.5	5.0	5.0	4.0	4.0	5.5	5.0	7.0	7.0
24	---	---	7.5	7.0	5.0	5.0	4.0	4.0	5.0	5.0	7.5	7.0
25	---	---	8.0	7.5	5.0	5.0	4.0	4.0	5.0	5.0	8.0	7.5
26	---	---	8.0	7.5	5.0	4.5	4.0	4.0	5.0	5.0	8.0	7.5
27	---	---	8.0	8.0	4.5	3.5	4.0	4.0	5.0	5.0	8.5	8.0
28	---	---	8.0	8.0	4.0	3.5	4.0	4.0	5.0	5.0	8.5	8.0
29	---	---	8.0	8.0	4.0	3.5	4.5	4.0	---	---	8.5	8.5
30	---	---	8.0	8.0	4.0	4.0	4.5	4.0	---	---	8.5	8.5
31	---	---	---	---	4.0	4.0	4.0	4.0	---	---	8.5	8.5
MONTH	17.0	15.0	13.0	6.5	9.0	3.5	4.5	1.0	5.5	4.0	8.5	4.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	8.5	10.5	10.5	15.0	14.5	18.0	17.5	21.0	20.5	20.0	19.5
2	9.0	8.5	10.5	10.5	15.5	15.0	18.0	17.5	21.0	20.0	20.5	20.0
3	9.0	8.5	11.0	10.5	16.0	15.0	17.5	17.0	21.5	20.5	20.0	19.5
4	9.0	9.0	11.0	10.5	16.0	15.5	17.5	17.0	21.5	21.0	19.5	19.5
5	9.0	9.0	11.0	10.5	16.5	15.5	17.5	17.0	21.5	21.0	19.5	19.5
6	9.5	9.0	11.5	11.0	16.5	16.0	18.0	17.5	22.0	20.5	19.5	19.0
7	9.5	9.0	12.0	11.5	16.5	16.0	18.5	18.0	22.0	21.0	19.0	19.0
8	9.5	9.0	12.5	12.0	16.5	16.0	19.0	18.0	22.5	21.5	19.0	18.5
9	10.0	9.5	12.5	12.0	16.5	16.0	19.0	18.5	22.5	22.0	18.5	18.5
10	10.0	9.5	12.0	12.0	16.0	15.5	18.5	18.5	22.5	22.0	19.0	18.5
11	10.0	9.5	12.0	12.0	16.5	15.5	18.5	18.0	22.5	22.0	19.0	18.5
12	10.0	9.5	12.5	12.0	16.5	16.0	19.0	18.0	22.0	21.5	19.0	18.5
13	9.5	9.5	12.5	12.0	16.5	16.0	19.5	18.5	22.0	21.0	18.5	18.5
14	9.5	9.5	12.5	12.0	16.5	16.0	20.0	19.0	22.0	21.0	19.0	18.5
15	9.5	9.5	12.0	12.0	16.0	16.0	19.5	19.5	21.0	20.5	19.0	18.5
16	9.5	9.5	12.5	12.0	16.0	16.0	19.5	19.0	20.5	20.0	18.5	18.0
17	9.5	9.5	12.5	12.0	16.5	16.0	19.0	18.5	21.0	20.0	18.0	17.5
18	10.0	9.5	13.0	12.5	16.5	16.5	19.0	18.5	20.5	20.0	17.5	17.5
19	10.0	9.5	13.5	13.0	17.0	16.5	19.5	19.0	20.5	20.5	17.5	17.0
20	10.0	9.5	14.0	13.5	17.5	16.5	20.0	19.5	20.5	20.0	17.5	17.0
21	10.0	9.5	14.0	13.5	17.5	16.5	20.5	20.0	20.0	19.5	17.5	17.0
22	9.5	9.5	13.5	13.0	17.0	16.5	21.0	20.0	20.0	19.5	17.5	17.0
23	9.5	9.5	13.5	13.5	17.0	17.0	21.5	20.5	20.0	19.5	17.5	17.0
24	10.0	9.5	13.5	13.0	17.0	16.5	21.0	20.5	19.5	19.5	18.0	17.5
25	10.5	10.0	14.0	13.0	16.5	16.5	21.5	21.0	20.0	19.5	18.0	17.5
26	10.5	10.0	14.0	13.5	17.0	16.5	21.5	21.0	20.0	19.5	18.0	17.5
27	10.5	10.0	14.0	13.5	17.5	17.0	20.5	19.0	20.0	19.0	18.0	17.5
28	10.5	10.0	14.0	13.5	18.0	17.5	19.0	19.0	20.5	19.5	18.0	17.5
29	10.5	10.0	14.5	13.5	18.0	17.5	21.0	19.0	20.5	20.0	18.0	17.5
30	10.5	10.5	14.5	14.0	18.0	17.5	21.0	20.5	20.5	20.0	17.5	17.0
31	---	---	14.5	14.0	---	---	21.0	20.5	20.0	20.0	---	---
MONTH	10.5	8.5	14.5	10.5	18.0	14.5	21.5	17.0	22.5	19.0	20.5	17.0

14144800 MIDDLE FORK WILLAMETTE RIVER NEAR OAKRIDGE, OR

LOCATION.--Lat 43°35'50", long 122°27'20", in NW¼NE¼ sec.9, T.23 S., R.3 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 0.2 mi (0.3 km) upstream from Windfall Creek, 8.3 mi (13.4 km) upstream from Hills Creek Dam, 10.2 mi (16.4 km) south of Oakridge, and at mile 240.8 (387.4 km).

DRAINAGE AREA.--258 mi^2 (668 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,556.83 ft (474.522 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to June 21, 1967, at site 0.5 mi (0.8 km) upstream at different datums. June 22, 1967, to June 23, 1971, water-stage recorder at same site at datum 5.00 ft (1.524 m) higher.

REMARKS.--Water-discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--20 years, 809 ft^3/s (22.91 m^3/s), 42.58 in/yr (1,082 mm/yr), 586,100 acre-ft/yr (723 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,800 ft^3/s (1,130 m^3/s) Dec. 22, 1964, gage height, 16.96 ft (5.169 m), from floodmark, site and datum then in use, from rating curve extended above 5,100 ft^3/s (144 m^3/s) on basis of slope-area measurement of peak flow; minimum, 187 ft^3/s (5.30 m^3/s) Sept. 15, 16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft^3/s (99.1 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	unknown	*16,100	456	*13.20	4.023	Dec. 14	2100	15,100	428	12.92	3.938

Minimum, 210 ft^3/s (5.95 m^3/s) Oct. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	315	490	1190	1110	761	668	742	908	583	416	252	242
2	292	693	1380	1030	1040	641	742	847	583	491	252	239
3	269	570	2870	1050	2790	625	724	800	583	486	249	236
4	255	474	2120	1140	1830	620	696	768	588	452	249	245
5	245	454	1600	1130	1450	641	713	719	588	425	245	275
6	250	462	1650	1110	1310	657	719	679	588	399	242	301
7	279	442	1980	1040	1500	636	674	657	573	386	239	321
8	269	413	1570	973	1720	719	636	652	552	374	236	330
9	252	387	1250	994	1420	794	620	679	541	362	233	374
10	242	365	1060	1040	1190	761	646	690	578	354	231	641
11	237	350	1250	994	1040	730	679	730	531	346	231	578
12	232	339	1460	980	937	690	646	685	491	338	239	462
13	230	380	6780	987	853	663	625	724	486	330	262	411
14	225	416	10600	1020	794	630	604	755	471	321	249	399
15	222	652	9060	1030	781	604	588	1110	462	313	258	366
16	217	718	4130	1140	730	588	578	1020	438	325	278	342
17	217	570	3150	1380	719	583	562	908	416	321	288	350
18	215	502	2290	1330	724	583	547	833	407	305	255	448
19	215	396	1740	1330	749	604	552	813	403	298	245	425
20	212	365	1450	1240	794	625	552	813	394	294	242	399
21	212	377	1250	1230	813	657	557	826	390	288	265	382
22	212	1240	1140	1270	813	719	620	768	386	284	284	362
23	215	1290	1160	1120	820	826	685	719	378	281	275	346
24	225	5420	1780	1020	813	820	668	690	386	275	278	330
25	400	8560	1540	937	800	742	724	663	394	271	443	313
26	406	8030	1270	894	787	724	1160	625	378	278	309	301
27	339	3030	1170	820	736	736	1200	614	362	275	278	294
28	305	3330	1160	781	702	736	1080	609	370	268	262	288
29	315	1850	1270	781	---	742	987	614	438	262	255	281
30	628	1500	1460	749	---	774	944	604	403	258	252	275
31	528	---	1260	730	---	749	---	583	---	255	249	---
TOTAL	8675	44065	73040	32380	29416	21287	21470	23105	14141	10331	8125	10556
MEAN	280	1469	2356	1045	1051	687	716	745	471	333	262	352
MAX	628	8560	10600	1380	2790	826	1200	1110	588	491	443	641
MIN	212	339	1060	730	702	583	547	583	362	255	231	236
AC-FT	17210	87400	144900	64230	58350	42220	42590	45830	28050	20490	16120	20940

CAL YR 1977 TOTAL 230521 MEAN 632 MAX 10600 MIN 187 AC-FT 457200
WTR YR 1978 TOTAL 296591 MEAN 813 MAX 10600 MIN 212 AC-FT 588300

14144800 MIDDLE FORK WILLAMETTE RIVER NEAR OAKRIDGE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1958 to January 1959, September 1959 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 23.0°C July 15, 1970; minimum, 0.0°C on several days during winter period most years.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 21.5°C July 23; minimum, 1.0°C Nov. 20.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	8.5	9.5	7.5	7.5	6.0	5.0	3.5	5.5	4.5	---	---
2	13.0	9.0	8.5	6.5	8.0	7.0	5.5	4.5	5.5	5.0	---	---
3	13.0	9.0	7.5	5.5	8.0	7.0	6.5	5.5	7.5	5.5	---	---
4	12.5	8.0	6.5	5.0	7.5	6.5	6.0	5.5	6.5	5.5	---	---
5	13.0	9.0	8.0	6.0	6.5	5.0	6.5	6.0	7.5	6.0	---	---
6	10.5	9.0	8.5	6.5	8.0	6.0	7.0	6.0	7.0	5.5	---	---
7	11.5	9.0	8.0	6.0	7.0	5.0	6.5	5.0	6.5	5.5	---	---
8	12.0	8.0	6.5	4.5	5.5	4.5	8.0	6.5	6.0	5.0	7.5	6.5
9	12.0	8.5	6.0	3.5	6.0	4.5	7.5	6.5	6.0	5.0	9.0	6.0
10	11.5	7.0	7.0	4.5	6.5	5.5	7.5	6.5	5.0	4.0	8.0	5.0
11	12.0	7.0	7.5	5.5	7.0	6.5	6.5	5.5	5.0	3.5	6.5	5.0
12	12.0	8.0	7.0	5.0	7.0	6.5	6.5	6.0	4.5	3.0	7.5	4.0
13	12.0	8.5	8.0	6.5	8.0	7.0	7.0	6.5	6.0	3.5	---	---
14	12.5	8.0	7.5	6.5	8.0	8.0	7.0	6.5	5.5	4.0	---	---
15	12.5	8.0	8.5	7.5	8.0	5.5	7.0	6.5	6.0	3.5	---	---
16	12.0	8.5	7.5	6.0	6.0	5.5	7.5	6.5	5.0	3.5	---	---
17	12.0	7.5	6.5	5.0	6.5	5.5	7.0	6.5	6.0	4.0	---	---
18	12.0	7.5	5.0	3.5	6.0	5.0	6.5	6.0	7.5	5.0	---	---
19	12.0	8.5	3.5	2.0	5.0	4.5	7.0	5.5	8.5	4.5	---	---
20	10.0	8.0	2.5	1.0	5.0	4.0	7.5	6.0	8.0	4.5	---	---
21	11.0	7.0	3.0	1.5	6.0	5.0	6.5	5.5	8.5	5.0	---	---
22	10.0	6.5	5.0	3.0	6.5	5.5	6.0	5.0	8.5	4.5	11.5	7.0
23	10.5	8.5	6.0	5.0	6.5	5.5	5.0	4.0	8.0	5.0	7.5	6.0
24	11.0	8.5	6.5	6.0	7.0	6.0	5.0	3.5	7.5	6.0	8.0	6.0
25	10.5	9.0	7.5	6.5	6.0	5.0	5.5	4.0	7.5	5.5	10.5	6.0
26	10.5	8.5	7.0	6.5	6.0	5.0	6.5	5.0	7.0	5.5	12.0	6.0
27	9.5	7.5	7.0	6.5	6.0	5.0	6.0	4.0	7.5	4.0	12.0	7.0
28	9.0	7.5	7.0	6.0	7.0	5.5	6.5	5.0	---	---	11.5	6.5
29	8.5	7.5	8.5	7.0	7.0	6.0	7.5	5.5	---	---	9.5	6.5
30	8.5	7.5	7.0	6.0	6.5	5.5	7.0	4.5	---	---	10.0	7.5
31	8.5	7.0	---	---	5.5	4.5	6.5	5.0	---	---	9.5	7.0
MONTH	13.0	6.5	9.5	1.0	8.0	4.0	8.0	3.5	8.5	3.0	12.0	4.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.5	6.0	10.0	6.5	---	---	16.5	13.0	19.5	13.0	17.5	12.0
2	8.5	5.0	10.5	6.0	---	---	14.5	12.5	19.5	13.0	17.5	12.0
3	9.0	5.0	10.5	6.5	---	---	13.0	12.0	20.0	13.5	15.0	12.5
4	9.0	5.0	8.0	5.5	---	---	17.5	12.0	20.0	14.5	13.0	12.0
5	9.0	5.0	11.5	4.5	---	---	18.0	12.5	19.5	13.5	13.0	11.5
6	9.5	4.5	---	---	---	---	19.0	12.5	20.0	13.5	13.0	11.5
7	---	4.5	---	---	16.5	8.5	19.5	13.5	20.5	14.0	12.5	11.0
8	---	---	---	---	17.0	11.0	19.5	14.0	21.0	14.5	12.5	10.0
9	---	---	13.0	8.0	13.5	11.5	19.0	13.0	20.0	14.0	12.5	11.0
10	---	---	13.0	7.0	12.5	10.0	18.5	13.0	19.5	13.5	12.5	10.5
11	---	---	10.0	7.0	16.0	9.5	18.5	12.0	19.0	13.5	13.5	10.5
12	---	---	10.0	6.0	14.5	11.0	19.5	12.5	16.0	14.0	14.0	9.5
13	---	---	11.5	7.5	14.0	10.5	20.0	13.5	15.5	12.5	11.5	10.5
14	---	---	10.0	7.5	14.0	10.0	21.0	14.5	18.0	11.5	14.0	10.5
15	---	---	9.0	6.5	14.5	9.5	19.0	15.5	15.0	12.5	13.5	10.5
16	---	---	10.5	6.5	16.0	9.5	18.0	14.5	14.0	12.0	13.0	9.5
17	---	---	12.0	6.0	17.5	10.0	20.0	14.0	15.5	11.5	11.0	9.0
18	---	---	13.0	7.0	14.5	11.5	20.0	14.5	17.5	11.5	11.0	8.5
19	---	---	12.0	7.5	17.5	11.5	20.0	14.0	17.5	12.0	12.0	7.5
20	---	---	12.5	8.0	18.0	12.0	20.0	14.0	14.5	12.5	13.0	8.0
21	---	---	9.5	7.5	18.0	12.5	20.5	13.5	14.0	12.0	12.5	9.5
22	---	---	10.5	6.5	17.5	12.0	20.0	14.0	13.5	11.5	13.0	9.0
23	10.0	5.5	10.5	6.5	14.5	12.5	21.5	14.5	14.0	11.0	14.0	8.5
24	10.5	5.5	10.0	6.0	14.5	11.5	21.0	14.5	14.0	12.0	14.0	9.5
25	8.5	7.0	---	---	13.5	11.5	21.0	14.5	15.5	11.5	12.5	10.0
26	7.0	6.5	---	---	18.0	11.5	19.0	15.5	16.0	10.5	14.5	10.0
27	8.5	6.5	---	---	18.5	11.5	20.0	14.0	17.0	11.0	14.0	11.0
28	9.0	6.5	---	---	16.5	12.5	20.0	14.0	17.5	11.5	14.0	9.5
29	10.5	6.5	---	---	14.5	13.0	20.0	13.5	18.0	12.5	14.0	9.0
30	8.0	6.5	---	---	17.0	13.0	20.0	14.0	15.5	13.0	13.5	9.5
31	---	---	---	---	---	---	19.5	13.5	16.5	13.0	---	---
MONTH	10.5	4.5	13.0	4.5	18.5	8.5	21.5	12.0	21.0	10.5	17.5	7.5

14144900 HILLS CREEK ABOVE HILLS CREEK LAKE, NEAR OAKRIDGE, OR

LOCATION.--Lat 43°40'50", long 122°22'10", in NW¼NW¼ sec.8, T.22 S., R.4 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 0.2 mi (0.3 km) downstream from Tufti Creek, 0.7 mi (1.1 km) upstream from Hills Creek Lake, 6.5 mi (10.5 km) southeast of Oakridge, and at mile 4.1 (6.6 km).

DRAINAGE AREA.--52.7 mi^2 (136.5 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to current year. Prior to October 1971, published as Hills Creek above Hills Creek Reservoir.

GAGE.--Water-stage recorder. Datum of gage is 1,630.80 ft (497.068 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Water-discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--20 years, 153 ft^3/s (4.333 m^3/s), 39.43 in/yr (1,002 mm/yr), 110,800 acre-ft/yr (137 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft^3/s (303 m^3/s) Dec. 22, 1964, gage height, 12.23 ft (3.728 m), from rating curve extended above 1,800 ft^3/s (51.0 m^3/s) on basis of slope-area measurement of peak flow; minimum, 14 ft^3/s (0.40 m^3/s) Nov. 1, 1958.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft^3/s (19.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2130	2,250	63.7	7.40	2.256	Dec. 14	1830	*2,560	72.5	*7.71	2.350

Minimum, 20 ft^3/s (0.57 m^3/s) Oct. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	88	242	192	129	110	129	257	98	66	34	41
2	45	158	245	174	170	106	120	229	98	92	33	39
3	41	116	441	182	433	102	112	198	96	124	33	37
4	37	93	324	196	337	102	108	178	94	124	32	39
5	34	83	242	194	274	110	106	157	94	108	32	48
6	34	78	250	186	236	112	104	142	90	94	31	58
7	36	76	359	168	272	108	100	135	84	83	31	76
8	33	72	296	163	314	135	94	131	77	76	30	79
9	31	65	230	170	260	180	96	135	74	69	29	94
10	28	59	190	196	213	163	108	135	94	64	28	178
11	27	55	250	188	184	152	114	138	79	59	28	155
12	25	51	263	188	165	142	106	127	69	56	31	124
13	25	60	1080	188	148	137	100	142	74	54	42	108
14	24	63	1710	190	135	129	94	152	69	51	34	116
15	24	101	1400	188	131	122	90	248	69	50	37	102
16	23	114	702	205	122	118	88	222	62	56	44	88
17	23	97	548	239	120	118	84	196	58	51	47	98
18	22	86	413	243	131	118	81	180	55	48	37	142
19	21	75	311	241	152	122	81	172	54	48	34	137
20	21	66	248	213	167	124	79	170	51	46	33	131
21	21	66	211	211	168	129	81	168	50	44	36	120
22	20	307	190	213	167	135	86	148	47	43	71	108
23	21	288	205	192	165	155	94	131	46	42	59	96
24	24	834	306	172	159	146	98	126	55	39	55	84
25	78	1380	267	159	150	133	129	120	56	38	118	76
26	78	1220	222	150	140	133	433	110	50	43	74	69
27	60	610	205	138	127	137	423	110	46	39	59	62
28	49	409	205	131	118	135	332	110	46	37	52	58
29	53	371	229	135	---	135	282	106	55	36	48	55
30	127	307	267	127	---	142	255	102	54	35	46	51
31	96	---	227	122	---	131	---	98	---	35	43	---
TOTAL	1237	7448	12278	5654	5287	4021	4207	4773	2044	1850	1341	2669
MEAN	39.9	248	396	182	189	130	140	154	68.1	59.7	43.3	89.0
MAX	127	1380	1710	243	433	180	433	257	98	124	118	178
MIN	20	51	190	122	118	102	79	98	46	35	28	37
AC-FT	2450	14770	24350	11210	10490	7980	8340	9470	4050	3670	2660	5290

CAL YR 1977 TOTAL 40498 MEAN 111 MAX 1710 MIN 17 AC-FT 80330
WTR YR 1978 TOTAL 52809 MEAN 145 MAX 1710 MIN 20 AC-FT 104700

14144900 HILLS CREEK ABOVE HILLS CREEK LAKE, NEAR OAKRIDGE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1958 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 22.5°C Aug. 7, 1972; minimum, 0.0°C Jan. 19-25, 1962, Jan. 5-11, 1974, Feb. 4-7, 1976.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 21.0°C Aug. 9, 10; minimum recorded, 2.0°C Nov. 19.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	7.5	9.0	7.5	---	---	6.5	6.0	5.5	5.0	5.5	3.0
2	11.5	9.0	8.5	6.0	---	---	6.0	5.5	5.5	4.5	6.0	3.5
3	12.0	8.5	7.5	5.5	---	---	6.5	6.0	7.0	5.5	7.0	5.0
4	11.5	7.5	6.5	5.0	---	---	6.5	6.0	7.0	5.5	7.5	5.5
5	11.5	9.0	8.0	6.0	---	---	6.5	6.5	7.5	6.5	6.5	6.0
6	10.5	8.5	7.5	6.5	7.0	6.5	6.5	6.0	7.0	5.5	7.5	5.0
7	10.0	8.5	7.5	5.5	6.5	5.0	6.5	6.0	6.5	5.5	8.0	6.0
8	10.5	7.0	5.5	4.5	5.0	4.0	7.5	6.5	6.0	5.0	7.0	6.5
9	10.0	7.0	6.0	3.5	5.5	4.0	7.0	6.5	5.5	4.5	8.0	6.0
10	10.0	6.5	7.0	4.5	6.0	5.0	7.0	6.5	5.0	4.0	7.5	5.5
11	11.0	7.0	7.5	5.5	6.5	6.0	7.0	6.5	4.5	3.5	6.5	5.0
12	11.5	7.5	7.0	5.0	6.5	6.0	7.0	6.5	4.5	3.0	6.0	4.0
13	11.5	9.5	7.5	6.5	7.5	6.5	7.0	7.0	5.5	3.5	6.5	4.5
14	12.0	9.0	7.5	6.0	7.5	7.5	7.0	7.0	5.5	4.0	6.5	4.5
15	12.0	9.5	8.0	7.0	7.5	5.0	7.0	7.0	5.0	3.0	7.0	3.5
16	11.5	9.5	7.0	6.0	5.5	5.0	7.0	7.0	4.5	3.0	8.0	4.0
17	11.5	8.5	6.0	4.5	6.0	5.0	7.0	6.5	5.5	3.5	9.0	5.0
18	11.0	8.5	4.5	2.5	7.0	5.5	6.5	5.5	6.5	4.5	9.5	5.5
19	11.0	9.0	---	2.0	7.5	4.5	6.5	5.5	6.5	4.0	10.0	6.0
20	11.0	9.0	---	---	6.0	4.0	7.0	6.0	7.0	4.5	10.0	5.5
21	10.0	8.5	---	---	6.5	5.5	6.5	5.5	7.0	5.0	10.0	6.5
22	10.5	7.5	---	---	6.5	6.0	5.5	5.0	7.0	5.0	10.0	7.5
23	10.5	9.0	---	---	7.0	6.0	5.0	4.0	7.5	5.0	8.0	6.5
24	11.5	9.5	---	---	6.5	5.5	4.5	3.5	7.5	6.0	8.0	6.0
25	11.0	9.5	---	---	5.5	5.0	5.5	4.0	7.0	5.0	10.0	6.0
26	10.0	8.5	---	---	7.0	5.5	6.0	5.0	6.5	5.0	10.0	6.5
27	9.5	8.0	---	---	7.0	6.5	5.5	4.0	5.5	4.0	10.5	7.5
28	9.5	7.5	---	---	7.0	6.5	6.0	5.0	6.0	3.0	10.5	7.0
29	9.0	7.5	---	---	7.0	5.5	6.5	5.5	---	---	9.5	7.0
30	8.5	7.5	---	---	6.0	5.0	5.5	4.5	---	---	9.0	7.5
31	8.5	7.5	---	---	6.5	5.5	6.0	5.0	---	---	10.0	7.5
MONTH	12.0	6.5	9.0	2.0	7.5	4.0	7.5	3.5	7.5	3.0	10.5	3.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	6.0	8.0	6.5	14.0	6.5	14.5	12.5	---	---	16.0	14.5
2	8.0	5.5	8.5	6.5	14.5	8.5	13.5	11.5	---	---	16.5	13.5
3	8.5	5.0	9.5	6.5	15.5	9.0	12.0	11.0	---	---	17.0	13.5
4	8.0	5.5	10.0	6.0	16.0	9.5	15.5	11.0	19.5	---	16.5	14.0
5	7.5	5.5	7.0	5.5	16.5	10.5	16.0	10.5	19.5	17.5	14.5	13.0
6	7.5	5.0	8.0	5.0	17.5	11.0	17.5	11.0	19.0	16.0	13.0	12.5
7	7.5	4.5	10.5	5.0	17.0	11.5	18.5	12.5	20.0	16.5	12.5	11.5
8	9.0	5.5	11.5	6.0	17.5	11.0	18.5	13.0	20.5	18.0	12.0	9.5
9	10.5	5.0	12.0	6.5	14.0	11.5	18.0	12.0	21.0	18.5	12.5	11.5
10	12.0	6.0	10.5	8.0	11.5	10.0	17.0	12.5	21.0	18.0	12.0	10.5
11	10.0	6.5	9.5	7.0	15.5	9.5	17.5	11.0	20.5	17.0	12.5	10.5
12	9.5	5.0	9.5	7.0	14.0	11.0	18.5	11.0	19.5	18.0	12.5	9.5
13	8.5	5.0	8.0	6.5	13.5	10.5	19.5	12.5	19.5	16.5	11.0	10.5
14	7.5	5.5	11.0	7.0	12.5	10.0	20.5	14.0	16.0	15.0	13.5	10.5
15	7.5	5.5	9.5	7.0	14.5	9.5	18.0	14.5	17.0	13.5	13.0	11.0
16	7.5	5.0	9.0	6.5	16.0	10.0	16.5	14.0	17.0	14.5	11.5	9.5
17	9.0	5.0	10.0	6.5	17.0	9.5	19.0	13.0	14.5	14.0	10.0	8.5
18	9.0	5.5	11.0	6.0	14.5	11.5	---	14.0	14.0	13.0	9.5	8.0
19	8.5	6.0	12.5	7.0	17.5	11.5	---	---	16.0	12.5	10.5	7.0
20	7.5	5.0	12.5	8.0	18.0	12.0	---	---	16.0	14.0	11.0	7.5
21	8.5	5.0	12.5	9.0	17.5	12.5	---	---	16.0	14.5	11.0	9.5
22	7.0	5.5	10.0	8.0	17.5	12.5	---	---	14.5	14.0	12.0	9.0
23	8.5	5.5	10.5	6.5	14.5	12.0	---	---	14.0	13.0	13.0	9.0
24	9.0	6.0	9.5	6.5	13.5	10.5	---	---	13.5	12.0	14.5	10.0
25	8.5	7.5	8.0	6.5	12.5	10.5	---	---	13.5	13.0	13.5	11.0
26	9.5	6.5	9.5	6.0	17.0	10.5	---	---	13.5	12.0	15.5	11.0
27	7.5	7.0	9.0	6.5	18.5	11.0	---	---	15.0	11.5	15.5	13.0
28	8.0	6.5	10.5	6.5	17.0	13.0	---	---	16.0	12.0	14.5	11.0
29	8.5	6.5	12.0	9.0	14.5	13.0	---	---	16.5	12.5	14.0	10.0
30	10.0	6.5	13.0	7.0	17.5	12.5	---	---	17.0	13.5	15.0	10.5
31	---	---	13.0	6.5	---	---	---	---	16.5	15.0	---	---
MONTH	12.0	4.5	13.0	5.0	18.5	6.5	20.5	10.5	21.0	11.5	17.0	7.0

14145100 HILLS CREEK LAKE NEAR OAKRIDGE, OR

LOCATION.--Lat 43°42'30", long 122°25'25", in NW¼ sec.35, T.21 S., R.3 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, near right end of Hills Creek Dam on Middle Fork Willamette River, 600 ft (183 m) downstream from Hills Creek, 3.5 mi (5.6 km) southeast of Oakridge, and at mile 232.5 (374.1 km).

DRAINAGE AREA.--389 mi^2 (1,008 km^2).

PERIOD OF RECORD.--August 1961 to current year. Prior to October 1971, published as Hills Creek Reservoir near Oakridge.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed in 1961 by the Corps of Engineers; storage began August 1961. Total capacity is 355,600 acre-ft (438 hm^3) at elevation 1,543.0 ft (470.31 m), top of spillway gates, and usable capacity is 248,900 acre-ft (307 hm^3) between elevations 1,414.0 ft (430.98 m), minimum power pool, and 1,543.0 ft (470.31 m). Reservoir used for flood control and power generation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 354,200 acre-ft (437 hm^3) June 25, 1971, elevation, 1,542.52 ft (470.160 m); minimum, 104,800 acre-ft (129 hm^3) Jan. 2, 1969, elevation, 1,412.52 ft (430.536 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 352,800 acre-ft (435 hm^3) June 6, elevation, 1,542.02 ft (470.008 m); minimum, 168,200 acre-ft (207 hm^3) Jan. 27, elevation, 1,455.98 ft (443.783 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)

1,410	101,500	1,460	174,900	1,520	297,200
1,420	114,600	1,480	211,000	1,540	347,300
1,440	143,000	1,500	251,900	1,544	358,500

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1467.78	1472.97	1485.08	1473.62	1458.07	1485.69	1503.67	1523.28	1541.71	1541.04	1540.96	1520.88
2	1467.92	1473.30	1483.06	1470.55	1459.65	1486.24	1504.31	1524.12	1541.93	1541.09	1540.87	1520.03
3	1468.08	1473.42	1483.48	1467.40	1464.02	1486.80	1504.91	1524.84	1542.01	1541.04	1540.66	1519.09
4	1468.31	1473.24	1482.44	1464.52	1465.85	1487.33	1505.48	1525.54	1542.00	1541.02	1540.41	1518.21
5	1468.53	1472.27	1480.86	1462.64	1467.02	1487.95	1506.07	1526.15	1542.00	1541.00	1540.14	1517.38
6	1468.70	1471.30	1480.00	1461.58	1467.91	1488.57	1506.67	1526.68	1542.02	1541.00	1539.87	1516.58
7	1469.06	1470.88	1479.63	1460.08	1469.08	1489.18	1507.20	1527.20	1541.84	1541.04	1539.59	1515.89
8	1469.31	1471.23	1478.72	1458.50	1470.34	1489.91	1507.68	1527.68	1541.52	1541.04	1539.32	1515.10
9	1469.63	1471.50	1477.38	1457.95	1470.90	1490.86	1508.13	1528.22	1541.18	1541.04	1538.66	1514.39
10	1469.73	1471.51	1475.69	1457.50	1470.99	1491.66	1508.61	1528.77	1541.02	1541.00	1537.87	1514.08
11	1469.90	1470.32	1474.40	1457.18	1471.09	1492.41	1509.17	1529.39	1541.00	1541.00	1537.06	1513.59
12	1470.12	1468.93	1473.48	1456.86	1471.10	1493.10	1509.65	1529.95	1541.00	1541.04	1536.34	1512.93
13	1470.31	1467.70	1480.13	1456.46	1471.45	1493.73	1510.23	1530.58	1541.04	1541.06	1535.57	1512.26
14	1470.49	1466.56	1491.70	1456.17	1472.38	1494.32	1510.66	1531.24	1541.05	1541.08	1534.78	1511.51
15	1470.67	1465.85	1501.05	1456.13	1473.30	1494.88	1511.10	1532.34	1541.05	1541.05	1534.02	1510.73
16	1470.83	1465.19	1505.13	1456.29	1474.17	1495.09	1511.53	1533.34	1541.02	1541.05	1533.31	1509.85
17	1471.00	1464.25	1507.95	1457.07	1475.02	1495.10	1511.90	1534.18	1541.00	1541.05	1532.56	1509.10
18	1471.16	1463.20	1508.40	1457.92	1475.91	1495.10	1512.28	1534.88	1541.02	1541.02	1531.78	1508.47
19	1471.30	1462.00	1505.16	1458.54	1476.92	1495.10	1512.68	1535.58	1541.06	1540.98	1530.97	1507.78
20	1471.47	1460.67	1501.45	1458.55	1477.97	1495.43	1513.08	1536.24	1541.06	1540.97	1530.22	1507.02
21	1471.61	1459.30	1498.58	1458.27	1478.98	1496.02	1513.49	1536.90	1541.04	1540.96	1529.39	1506.26
22	1471.76	1460.30	1496.14	1457.97	1480.12	1496.67	1513.97	1537.49	1541.01	1540.98	1528.69	1505.45
23	1471.93	1461.08	1493.83	1458.29	1481.04	1497.50	1514.56	1538.01	1541.00	1541.01	1528.04	1504.61
24	1472.14	1468.25	1492.63	1458.03	1481.93	1498.28	1515.12	1538.52	1541.02	1541.00	1527.34	1503.72
25	1472.66	1477.85	1490.80	1457.22	1482.83	1498.98	1515.83	1538.98	1541.03	1540.95	1526.73	1502.77
26	1473.15	1486.63	1488.45	1456.42	1483.67	1498.65	1517.45	1539.40	1541.04	1540.93	1525.99	1501.84
27	1473.28	1489.63	1485.96	1456.04	1484.38	1500.35	1518.98	1539.82	1541.05	1540.90	1525.20	1500.92
28	1472.86	1490.26	1483.38	1456.21	1485.06	1501.01	1520.32	1540.26	1541.05	1540.86	1524.34	1499.95
29	1472.48	1488.96	1480.95	1456.35	---	1501.70	1521.38	1540.63	1541.08	1540.87	1523.52	1498.97
30	1472.66	1487.33	1478.93	1456.42	---	1502.39	1522.35	1541.00	1541.05	1540.90	1522.66	1497.99
31	1472.78	---	1476.48	1457.20	---	1503.03	---	1541.37	---	1540.94	1521.77	---
MEAN	1470.70	1471.53	1487.78	1459.16	1473.61	1494.29	1511.62	1532.99	1541.26	1541.00	1532.86	1509.91
MAX	1473.28	1490.26	1508.40	1473.62	1485.06	1503.03	1522.35	1541.37	1542.02	1541.09	1540.96	1520.88
MIN	1467.78	1459.30	1473.48	1456.04	1458.07	1485.69	1503.67	1523.28	1541.00	1540.86	1521.77	1497.99
(†)	197,400	225,400	204,300	170,200	220,900	258,500	302,800	351,000	350,200	349,900	301,400	247,500
(‡)	+9,100	+28,000	-21,100	-34,100	+50,700	+37,600	+44,300	+48,200	-800	-300	-48,500	-53,900

CAL YR 1977 MEAN 1479.76 MAX 1527.60 MIN 1434.89 AC-FT‡ +64,700
WTR YR 1978 MEAN 1502.39 MAX 1542.02 MIN 1456.04 AC-FT‡ +59,200

† Contents, in acre-feet, at 2400, on last day of month.
‡ Change in contents, in acre-feet.

14145500 MIDDLE FORK WILLAMETTE RIVER ABOVE SALT CREEK, NEAR OAKRIDGE, OR

LOCATION.--Lat 43°43'20", long 122°26'15", in NW¼NE¼ sec.27, T.21 S., R.3 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 90 ft (27 m) upstream from highway bridge, 0.4 mi (0.6 km) upstream from Salt Creek, 1.1 mi (1.8 km) downstream from Hills Creek Dam, 2.3 mi (3.7 km) southeast of Oakridge, and at mile 231.4 (372.3 km).

DRAINAGE AREA.--392 mi^2 (1,015 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1913 to September 1914, September 1935 to current year. Monthly discharge only September 1935, published in WSP 1318.

REVISED RECORDS.--WSP 1248: 1914.

GAGE.--Water-stage recorder. Datum of gage is 1,208.01 ft (368.201 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Oct. 3, 1913, to Sept. 30, 1914, nonrecording gage and Sept. 1, 1935, to Aug. 18, 1960, water-stage recorder at sites 400 ft (122 m) and 1,000 ft (305 m) downstream, respectively, at different datum.

REMARKS.--Water-discharge records good. Flow regulated since 1961 by Hills Creek Lake (see station 14145100). No diversions above station.

AVERAGE DISCHARGE.--44 years, 1,148 ft^3/s (32.51 m^3/s), 39.77 in/yr (1,010 mm/yr), 831,700 acre-ft/yr (1.03 km^3/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft^3/s (963 m^3/s) Dec. 28, 1945, gage height, 12.06 ft (3.676 m), site and datum then in use, from rating curve extended above 13,000 ft^3/s (368 m^3/s); minimum observed, 0.70 ft^3/s (0.020 m^3/s) Sept. 8-11, 13, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,400 ft^3/s (181 m^3/s) Dec. 20, gage height, 7.38 ft (2.249 m); minimum, 71 ft^3/s (2.01 m^3/s) Apr. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	421	586	4280	4240	316	252	239	221	244	526	286	1400
2	234	744	4230	4240	316	250	239	219	404	629	395	1390
3	201	750	4160	4260	888	247	239	226	668	726	526	1400
4	104	934	4130	4160	1290	250	239	229	732	662	618	1410
5	104	1620	3810	3380	1170	250	239	231	714	591	607	1410
6	104	1620	3120	2700	1100	247	216	231	702	494	607	1420
7	104	1040	3090	2690	1320	226	244	231	927	429	602	1410
8	104	262	3180	2660	1830	229	239	229	1080	450	618	1430
9	104	258	3150	1910	1750	236	239	216	1100	459	1070	1440
10	104	535	3200	1910	1750	239	229	214	981	463	1280	1430
11	104	1610	3180	1730	1480	239	221	214	668	377	1290	1460
12	104	1660	3150	1690	1380	239	219	211	550	343	1300	1470
13	104	1670	2580	1780	875	239	216	226	545	343	1300	1410
14	104	1690	1680	1700	265	239	229	226	560	395	1310	1470
15	104	1700	1660	1510	244	234	234	231	555	404	1310	1460
16	104	1700	1520	1570	221	570	234	224	555	390	1330	1480
17	104	1700	1670	1480	224	768	234	224	517	390	1310	1460
18	104	1700	2930	1450	221	768	231	226	413	408	1330	1480
19	104	1710	6200	1520	221	768	229	224	438	390	1310	1470
20	106	1740	6220	1800	234	472	226	224	481	368	1320	1470
21	108	1760	5110	2090	242	234	231	226	476	316	1300	1460
22	108	1770	4160	2130	236	236	242	229	468	279	1300	1460
23	108	1770	4100	1390	239	231	242	236	450	293	1130	1460
24	108	1800	4140	1670	229	229	234	239	446	351	1320	1450
25	109	1830	4190	2010	221	226	224	239	446	360	1340	1440
26	109	1860	4190	1890	229	226	226	242	442	347	1340	1430
27	320	1830	4160	1470	236	231	226	236	417	343	1340	1350
28	812	2600	4190	921	239	231	229	242	442	356	1370	1420
29	825	4130	4260	927	---	229	221	244	481	255	1350	1420
30	825	4080	4140	927	---	224	236	239	517	231	1380	1400
31	679	---	4230	347	---	236	---	236	---	229	1390	---
TOTAL	6737	48659	114010	64152	18966	9495	6946	7085	17419	12597	34279	43060
MEAN	217	1622	3678	2069	677	306	232	229	581	406	1106	1435
MAX	825	4130	6220	4260	1830	768	244	244	1100	726	1390	1480
MIN	104	258	1520	347	221	224	216	211	244	229	286	1350
AC-FT	13360	96520	226100	127200	37620	18830	13780	14050	34550	24990	67990	85410
MEAN†	365	2,093	3,334	1,514	1,590	918	976	1,012	567	402	317	530
CFSM†	.93	5.34	8.51	3.86	4.06	2.34	2.49	2.58	1.45	1.03	.81	1.35
IN.†	1.07	5.96	9.81	4.45	4.23	2.70	2.78	2.98	1.61	1.18	.93	1.51
AC-FT†	22,460	124,520	205,000	93,100	88,320	56,430	58,080	62,250	33,750	24,690	19,490	31,510

CAL YR 1977 TOTAL 285,109 MEAN 781 MAX 6,220 MIN 77 AC-FT 565,500 MEAN† 870 CFSM† 2.22 IN.† 30.15 AC-FT† 630,200
WTR YR 1978 TOTAL 383,405 MEAN 1,050 MAX 6,220 MIN 104 AC-FT 760,500 MEAN† 1,132 CFSM† 2.89 IN.† 39.22 AC-FT† 819,700

† Adjusted for change in contents in Hills Creek Lake.

14145500 MIDDLE FORK WILLAMETTE RIVER ABOVE SALT CREEK, NEAR OAKRIDGE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1960 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 25.0°C Sept. 4, 1960; minimum, 1.5°C Jan. 4, 1961.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 15.0°C Sept. 29; minimum, 5.5°C on several days in February and March.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.5	11.5	---	---	8.0	8.0	7.0	7.0	6.5	6.0	7.5	6.0
2	13.5	10.5	---	---	8.5	8.0	7.0	6.5	6.0	6.0	7.5	6.0
3	14.0	11.5	---	---	8.0	8.0	7.0	7.0	6.5	6.0	7.0	6.0
4	14.0	11.5	12.5	---	8.0	7.5	7.0	7.0	6.5	6.0	7.0	6.0
5	14.0	11.5	12.5	12.0	8.0	7.5	7.0	6.5	6.5	6.0	6.5	6.0
6	13.0	12.0	12.0	12.0	8.0	7.5	7.0	6.5	6.5	6.0	7.5	6.0
7	13.0	11.5	12.0	10.5	7.5	7.0	6.5	6.5	6.5	6.0	7.0	6.5
8	14.5	10.5	11.0	10.5	7.5	7.5	6.5	6.5	6.5	6.0	7.0	6.0
9	13.5	11.5	11.0	10.5	7.5	7.5	6.5	6.5	6.0	6.0	7.0	5.5
10	14.0	11.5	11.5	10.5	7.5	7.0	6.5	6.5	6.0	5.5	7.0	6.0
11	14.0	11.5	11.5	11.0	7.5	7.5	7.0	6.5	6.0	5.5	6.5	6.0
12	13.5	11.5	11.0	11.0	7.5	7.5	7.0	6.5	6.0	6.0	7.5	6.0
13	---	11.5	11.0	11.0	7.5	7.0	7.0	6.5	6.0	6.0	7.0	6.0
14	---	---	11.0	11.0	7.5	7.0	6.5	6.5	6.0	5.5	7.5	5.5
15	---	---	11.0	10.5	7.5	7.0	7.0	6.5	6.5	5.5	7.5	5.5
16	---	---	10.5	10.5	7.5	7.0	7.0	7.0	6.0	5.5	7.0	6.0
17	---	---	10.5	10.0	7.0	7.0	7.0	7.0	6.0	5.5	7.5	6.5
18	---	---	10.0	9.5	7.0	7.0	7.0	7.0	6.5	5.5	7.0	6.5
19	---	---	10.0	9.5	7.0	7.0	7.0	6.0	7.0	5.5	7.0	6.5
20	---	---	9.5	9.0	7.0	7.0	6.0	6.0	7.0	6.0	7.5	6.0
21	---	---	9.0	9.0	7.0	7.0	6.5	6.0	7.0	6.0	7.5	6.0
22	---	---	9.0	9.0	7.0	7.0	6.0	6.0	7.5	6.0	7.0	6.0
23	---	---	9.0	8.5	7.0	7.0	6.5	6.0	7.0	6.0	7.0	6.5
24	---	---	8.5	8.5	7.0	7.0	6.5	6.0	6.5	6.0	6.5	6.0
25	---	---	8.5	8.0	7.0	7.0	6.0	6.0	7.0	6.0	7.5	6.0
26	---	---	8.5	7.5	7.0	7.0	6.0	6.0	6.5	6.0	8.0	6.0
27	---	---	8.0	8.0	7.0	7.0	6.5	6.0	7.0	5.5	8.0	6.0
28	---	---	8.5	8.0	7.0	7.0	6.5	6.0	7.5	5.5	8.0	6.0
29	---	---	8.0	8.0	7.0	7.0	6.0	6.0	---	---	7.0	6.0
30	---	---	8.0	8.0	7.0	7.0	6.0	6.0	---	---	7.0	6.0
31	---	---	---	---	7.0	6.5	6.5	6.0	---	---	7.0	6.0
MONTH	14.5	10.5	12.5	7.5	8.5	6.5	7.0	6.0	7.5	5.5	8.0	5.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	6.0	8.0	6.5	9.5	6.5	8.5	8.0	10.0	8.0	11.5	10.5
2	7.0	6.0	9.0	6.5	9.0	7.0	8.5	8.0	9.5	8.5	12.0	11.0
3	7.5	6.0	9.0	6.0	9.0	7.0	8.5	8.0	9.0	8.0	12.0	11.0
4	7.5	6.0	8.0	6.5	9.0	7.5	9.0	8.0	9.0	8.0	12.0	11.5
5	7.0	6.0	8.5	6.5	9.0	7.5	9.0	8.0	9.5	8.5	12.0	11.5
6	10.5	6.0	9.5	6.5	9.0	7.5	9.0	8.0	9.5	---	12.5	12.0
7	7.5	6.0	9.5	6.5	9.0	7.5	9.0	8.0	9.5	8.5	12.5	12.0
8	8.0	6.0	9.0	6.5	9.0	7.5	9.0	8.0	9.5	8.5	12.5	12.5
9	8.5	6.0	8.5	6.5	9.0	7.5	9.0	8.0	9.5	---	13.0	12.5
10	8.5	6.0	8.5	6.5	8.5	7.5	9.0	8.0	9.5	9.0	13.0	12.5
11	8.5	6.0	8.0	6.5	9.0	7.5	9.0	8.0	10.0	9.5	13.5	12.5
12	8.5	6.0	7.5	6.5	9.0	7.5	9.0	8.0	---	---	13.0	12.5
13	7.5	6.0	8.5	7.0	9.0	7.5	9.5	8.0	---	---	13.5	12.5
14	7.0	6.0	8.0	6.5	9.0	7.5	9.5	8.0	---	---	13.5	13.0
15	7.0	6.0	8.0	6.5	9.0	7.5	9.0	8.0	---	---	13.5	13.5
16	7.5	6.0	9.0	6.5	9.5	7.5	9.0	8.0	---	---	13.5	13.5
17	7.5	6.0	10.0	6.5	9.0	7.5	9.5	8.0	---	---	14.0	13.5
18	7.5	6.0	10.0	6.5	8.5	7.5	9.5	8.0	10.0	9.5	14.0	13.5
19	7.5	6.0	9.5	6.5	9.0	7.5	9.5	8.0	10.5	9.5	14.5	13.5
20	7.0	6.0	9.5	7.0	9.0	7.5	9.5	8.0	10.5	9.5	14.5	13.5
21	8.0	6.0	7.5	7.0	9.0	7.5	9.5	8.0	10.0	9.5	14.0	14.0
22	7.0	6.0	9.5	6.5	9.0	7.0	9.5	8.0	10.0	9.5	14.0	14.0
23	7.5	6.0	9.0	6.5	8.5	7.5	10.0	8.0	10.0	9.0	14.5	14.0
24	7.5	6.5	8.0	6.5	8.5	7.5	9.5	8.0	10.5	10.0	14.5	14.0
25	7.0	6.0	8.5	7.0	8.5	7.5	9.5	8.0	10.5	10.0	14.0	14.0
26	7.5	6.5	8.0	7.0	9.0	7.5	9.0	8.0	10.5	10.0	14.5	13.5
27	8.0	6.5	8.5	6.5	9.0	7.5	9.5	8.0	11.0	10.5	14.5	14.0
28	8.0	6.5	9.0	7.0	9.0	7.5	9.5	8.0	11.0	10.5	14.5	14.0
29	8.5	6.5	9.5	6.5	8.5	8.0	10.0	8.0	11.0	10.5	15.0	14.0
30	8.0	6.5	10.0	6.5	9.0	8.0	10.0	8.0	11.5	10.5	14.5	14.0
31	---	---	9.5	6.5	---	---	10.0	7.5	11.5	11.0	---	---
MONTH	10.5	6.0	10.0	6.0	9.5	6.5	10.0	7.5	11.5	8.0	15.0	10.5

14146500 SALMON CREEK NEAR OAKRIDGE, OR

LOCATION.--Lat 43°45'45", long 122°22'18", in NE¼ sec.7, T.21 S., R.4 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 190 ft (58 m) upstream from Salmon Creek Falls, 0.1 mi (0.2 km) upstream from Needle Creek, 4.6 mi (7.4 km) east of Oakridge, and at mile 5.84 (9.40 km).

DRAINAGE AREA.--117 mi^2 (303 km^2), at measuring cable 0.6 mi (1.0 km) downstream from gage.

PERIOD OF RECORD.--October to November 1909 (gage heights and one discharge measurement only), February 1913 to October 1919, October 1933 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as Kelsey River near Hazeldell and Salmon Creek near Hazeldell, 1909.

REVISED RECORDS.--WSP 794: 1934(M). WSP 814: Drainage area. WSP 1124: 1935, 1942(M), 1943, 1946(M). WSP 1248: 1915, 1918. WRD 1971 Oreg.: 1968, 1969(M,P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,462.36 ft (445.727 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1914, nonrecording gage at several sites within 4 mi (6 km) of present site at various datums. Oct. 1, 1914, to Oct. 14, 1919, water-stage recorder at site 1.8 mi (2.9 km) downstream at different datum. Nov. 5, 1933, to Oct. 27, 1964, water-stage recorder at site 0.8 mi (1.3 km) downstream at datum 40.53 ft (12.354 m) lower. Oct. 28, 1964, to Aug. 27, 1965, nonrecording gage at site 0.6 mi (1.0 km) downstream at different datum.

REMARKS.--Records good. No regulation or diversion above station. All records given herein are for measuring cable site.

AVERAGE DISCHARGE.--51 years (water years 1914-19, 1934-78), 428 ft^3/s (12.12 m^3/s), 49.68 in/yr (1,262 mm/yr), 310,100 acre-ft/yr (382 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft^3/s (329 m^3/s) Dec. 22, 1964, gage height, 9.15 ft (2.789 m), from floodmark, site and datum then in use, from rating curve extended above 2,100 ft^3/s (59.5 m^3/s) on basis of slope-area measurement of peak flow; minimum, 63 ft^3/s (1.78 m^3/s) Jan. 8, 1937.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft^3/s (48.1 m^3/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
Nov. 25	2230	*5,410	153	*6.62	2.018	Dec. 15	0030	3,840	109	5.55	1.692
Dec. 3	0400	3,310	93.7	5.16	1.573						

Minimum, 126 ft^3/s (3.57 m^3/s) Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	215	395	1110	611	423	365	329	457	290	221	144	144
2	189	654	1390	571	488	351	329	429	290	232	144	144
3	175	528	2830	565	1090	338	315	401	282	239	139	135
4	165	422	1890	565	941	338	311	380	274	239	139	139
5	157	373	1270	571	817	347	307	365	266	232	139	163
6	162	373	1190	558	731	347	298	347	262	224	135	167
7	186	358	1260	525	739	333	290	329	251	221	135	140
8	175	328	1090	500	754	351	282	324	243	214	130	187
9	165	298	916	506	694	380	274	324	243	207	130	207
10	159	274	801	532	617	370	270	324	298	203	130	274
11	154	254	801	512	558	361	278	375	286	200	126	294
12	149	244	777	500	506	351	278	375	258	197	135	262
13	143	265	1840	494	469	351	274	418	282	190	155	243
14	143	528	2880	494	440	347	266	423	278	187	139	239
15	138	1170	3190	506	434	333	262	591	294	183	155	224
16	135	1140	2120	512	407	329	266	584	278	200	167	210
17	135	825	1720	571	401	329	258	538	266	190	167	210
18	135	662	1290	584	418	324	254	488	258	187	151	251
19	133	537	1010	578	429	320	254	452	247	163	139	239
20	133	442	849	571	452	315	254	440	239	176	135	228
21	131	410	739	591	457	315	258	423	232	171	144	221
22	131	757	666	611	457	324	278	396	228	167	180	214
23	131	887	645	565	452	365	294	375	224	163	171	203
24	133	2410	801	519	440	356	294	361	228	159	180	197
25	225	3770	833	481	423	342	324	356	228	155	247	190
26	229	3760	739	469	429	333	631	333	217	155	190	183
27	193	2150	673	440	401	333	680	333	214	155	171	180
28	178	1480	638	423	380	333	584	333	210	151	163	171
29	175	1630	666	434	---	329	519	324	251	151	155	167
30	328	1340	731	423	---	342	488	315	224	148	151	159
31	358	---	680	418	---	333	---	298	---	148	151	---
TOTAL	5358	28664	38035	16200	15247	10585	9999	12211	7641	5828	4737	6025
MEAN	173	955	1227	523	545	341	333	394	255	188	153	201
MAX	358	3770	3190	611	1090	380	680	591	298	239	247	294
MIN	131	244	638	418	380	315	254	298	210	148	126	135
CFSM	1.48	8.16	10.5	4.47	4.66	2.92	2.85	3.37	2.18	1.61	1.31	1.72
IN.	1.70	9.11	12.09	5.15	4.85	3.37	3.18	3.88	2.43	1.85	1.51	1.92
AC-FT	10630	56860	75440	32130	30240	21000	19830	24220	15160	11560	9400	11950

CAL YR 1977 TOTAL 139099 MEAN 381 MAX 3770 MIN 122 CFSM 3.26 IN 44.23 AC-FT 275900
WTR YR 1978 TOTAL 160530 MEAN 440 MAX 3770 MIN 126 CFSM 3.76 IN 51.04 AC-FT 318400

14146700 GRAY CREEK NEAR OAKRIDGE, OR

LOCATION.--Lat 43°43'48", long 122°30'38", in NE¼SE¼ sec.24, T.21 S., R.2 E., Lane County, Hydrologic Unit 17090001, Willamette National Forest, on left bank 0.9 mi (1.4 km) upstream from bridge over La Duke Road, and 1.5 mi (2.4 km) southwest of Oakridge.

DRAINAGE AREA.--5.06 mi^2 (13.11 km^2).

PERIOD OF RECORD.--July to September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 1,300 ft (396 m), from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period July to September, 30 ft^3/s (0.85 m^3/s) Sept. 9, 10, gage height, 1.55 ft (0.472 m); no peak above base of 180 ft^3/s (5.10 m^3/s); minimum, 0.28 ft^3/s (0.008 m^3/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										1.5	.43	.94
2										2.0	.43	.77
3										2.0	.43	.77
4										2.0	.43	.94
5										1.9	.43	1.9
6										1.6	.40	3.0
7										1.5	.40	1.5
8										1.4	.37	3.1
9										1.3	.35	6.3
10										1.2	.32	22
11										1.1	.32	15
12										1.1	.43	7.6
13										1.0	1.0	5.6
14										.94	.70	7.3
15										1.0	.94	5.0
16										1.5	2.0	3.7
17										1.4	2.3	3.9
18										1.1	1.4	11
19										.94	.94	7.3
20										.85	.77	5.4
21										.77	1.3	3.7
22										.70	3.3	2.6
23										.63	2.7	2.3
24										.59	2.6	2.3
25										.59	7.6	2.1
26										.59	3.1	1.5
27										.54	2.1	1.4
28										.54	1.6	1.3
29										.54	1.3	1.4
30										.50	1.1	1.4
31										.47	1.0	---
TOTAL	---	---	---	---	---	---	---	---	---	33.79	42.49	133.02
MEAN	---	---	---	---	---	---	---	---	---	1.09	1.37	4.43
MAX	---	---	---	---	---	---	---	---	---	2.0	7.6	22
MIN	---	---	---	---	---	---	---	---	---	.47	.32	.77
AC-FT	---	---	---	---	---	---	---	---	---	67	84	264

14146950 WALDO LAKE NEAR OAKRIDGE, OR

LOCATION.--Lat 43°46'05", long 122°03'10", in SE¼NW¼ sec.7, T.21 S., R.6 E., Lane County, Hydrologic Unit 17090001, Willamette National Forest, on left bank at head of artificial outlet channel for Waldo Lake, at headwaters of the North Fork of the Middle Fork Willamette River, 20 mi (32 km) east of Oakridge, and at mile 43.51 (70.0 km).

DRAINAGE AREA.--30.5 mi^2 (79.0 km^2).

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Nonrecording gage. Altitude of gage is 5,410 ft (1,649.0 m), from topographic map; gage readings have been reduced to elevations National Geodetic Vertical Datum of 1929. Present gage is at same site and datum as former gage for Waldo Lake outlet near Oakridge (see sta 14147000) for period 1936-53.

REMARKS.--Lake not regulated. Lake level was lowered approximately 0.5 ft (0.2 m) when low rock dam in artificial outlet channel was removed Sept. 23, 1971. Lake outlet is an old artificial outlet channel 30 ft (9 m) below the gage. Diversion tunnel into head of Black Creek, near south end of lake, built about 1914, is not used; but leakage past old control gates was measured at 0.66 ft^3/s (0.019 m^3/s) Sept. 13, 1978. The maximum stage of the lake during period 1936-53 was 5,412.98 ft (1,649.876 m), which occurred Jan. 2, 1943. At times during this period the lake elevation could have been as much as 2 ft (0.6 m) below elevation 5,410 ft (1,649.0 m). A high-water mark noted Sept. 3, 1936, indicated that an elevation of 5,413.2 ft (1,649.94 m) had occurred sometime previous to that date. See station 14147000 for lake elevations for period 1936-53.

COOPERATION.--Waldo Lake bathymetric chart, used to compute capacity table, furnished by Environmental Protection Agency.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 778,900 acre-ft Mar. 18, 1971, elevation, 5,413.25 ft (1,649.969 m); minimum observed, 759,900 acre-ft (937 hm^3) Oct. 1, 1973, elevation, 5,410.22 ft (1,649.035 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 768,400 acre-ft (947 hm^3) June 15, elevation, 5,411.59 ft (1,649.453 m); minimum observed, 761,000 acre-ft (938 hm^3) Oct. 4, elevation, 5,410.40 ft (1,649.090 m).

ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)
June 15	5,411.59	768,400
Aug. 31	5,411.14	765,600
Sept.13	5,410.89	764,000

14147000 WALDO LAKE OUTLET NEAR OAKRIDGE, OR

LOCATION.--Lat 43°46'05", long 122°03'10", in SE¼NW¼ sec.7, T.21 S., R.6 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank of artificial outlet channel of Waldo Lake forming the headwaters of the North Fork of the Middle Fork of Willamette River, 20 mi (32 km) east of Oakridge, and at mile 43.5 (70.0 km).

DRAINAGE AREA.--30.5 mi^2 (79.0 km^2), of which about 10.5 mi^2 (27.2 km^2) is Waldo Lake.

PERIOD OF RECORD.--October 1936 to September 1953, October 1969 to current year.

REVISED RECORDS.--WSP 2135: Drainage area.

GAGE.--Water-stage recorder and modified v-notch weir. Altitude of gage is 5,410 ft (1,649 m), from topographic map. October 1936 to September 1953, at site 120 ft (37 m) upstream on left bank at same datum.

REMARKS.--Records good. At times seiches from Waldo Lake cause rapid changes in stage at gage many times each hour. No regulation. Diversion tunnel into head of Black Creek, near south end of lake, built about 1914, is sealed off, but there was leakage of about 0.66 ft^3/s (0.019 m^3/s) past control gates, measured Sept. 13, 1978.

AVERAGE DISCHARGE.--26 years, 34.8 ft^3/s (0.986 m^3/s), 25,210 acre-ft/yr (31.1 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150 ft^3/s (4.25 m^3/s) Jan. 20, 1971, from rating curve extended above 77 ft^3/s (2.18 m^3/s) and adjusted for overbank flow; maximum gage height, 2.98 ft (0.908 m) Jan. 2, 1943; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--A high-water mark in the channel of a previous high stage in the lake was noted on Sept. 3, 1936, as 3.2 ft (0.98 m) gage height, affected by seiche.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 101 ft^3/s (2.86 m^3/s) Dec. 17, gage height, 2.24 ft (0.683 m); minimum, 0.72 ft^3/s (0.020 m^3/s) Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	2.9	39	79	58	47	34	35	33	29	17	9.4
2	2.3	3.6	41	78	59	46	35	35	33	30	17	9.1
3	2.2	3.6	48	77	63	45	36	34	32	31	16	8.8
4	2.1	3.4	50	75	62	45	36	34	32	30	16	8.5
5	1.7	3.4	50	74	62	45	36	34	32	30	15	9.4
6	1.7	3.6	52	73	60	45	36	33	31	29	15	9.4
7	1.9	3.6	56	73	60	45	36	32	31	29	15	9.4
8	1.9	3.6	56	70	64	44	35	32	31	28	14	9.7
9	1.7	3.2	54	69	64	44	35	32	31	27	14	10
10	1.7	3.2	54	68	62	44	34	32	33	26	13	11
11	1.6	2.9	55	67	61	43	33	33	34	26	13	11
12	1.5	2.9	56	67	60	42	33	34	33	25	12	11
13	1.4	3.1	65	67	58	43	32	35	33	25	13	11
14	1.3	4.2	77	67	58	43	31	35	34	24	12	11
15	1.2	5.7	90	65	60	42	31	38	35	24	12	10
16	1.2	6.1	97	66	59	41	31	38	34	24	12	10
17	1.1	6.1	100	67	58	40	31	38	33	24	12	10
18	1.1	6.4	99	67	58	39	31	37	32	23	12	10
19	.96	6.6	97	65	56	38	30	36	32	23	11	10
20	.91	6.4	94	65	55	38	30	36	32	22	11	10
21	.86	6.4	90	65	54	37	31	36	31	22	11	9.4
22	.81	8.2	87	66	53	36	32	36	31	21	11	9.1
23	.72	10	86	65	52	37	32	36	30	21	11	9.1
24	.77	15	87	63	51	38	32	36	30	20	11	8.8
25	1.5	21	86	62	50	37	32	36	30	20	11	8.5
26	1.7	31	85	62	50	36	35	36	29	20	11	8.2
27	1.7	33	83	60	49	36	35	36	28	20	11	7.9
28	1.6	35	81	59	48	35	35	36	28	19	11	7.7
29	1.6	37	81	60	---	35	35	35	30	19	10	7.7
30	2.4	38	82	58	---	35	35	35	30	18	10	7.4
31	2.8	---	82	58	---	35	---	34	---	18	9.7	---
TOTAL	48.43	319.1	2260	2077	1604	1256	1000	1085	948	747	389.7	282.5
MEAN	1.56	10.6	72.9	67.0	57.3	40.5	33.3	35.0	31.6	24.1	12.6	9.42
MAX	2.8	38	100	79	64	47	36	38	35	31	17	11
MIN	.72	2.9	39	58	48	35	30	32	28	18	9.7	7.4
AC-FT	96	633	4480	4120	3180	2490	1980	2150	1880	1480	773	560

CAL YR 1977 TOTAL 5084.73 MEAN 13.9 MAX 100 MIN .24 AC-FT 10090
WTR YR 1978 TOTAL 12016.73 MEAN 32.9 MAX 100 MIN .72 AC-FT 23840

14147500 NORTH FORK OF MIDDLE FORK WILLAMETTE RIVER NEAR OAKRIDGE, OR

LOCATION.--Lat 43°45'25", long 122°30'13", in SW¼ sec.7, T.21 S., R.3 E., Lane County, Hydrologic Unit 17090001, on left bank 2.5 mi (4.0 km) northwest of Oakridge and at mile 1.0 (1.6 km).

DRAINAGE AREA.--246 mi² (637 km²), at measuring section 0.5 mi (0.8 km) downstream.

PERIOD OF RECORD.--October 1909 to March 1916, September 1935 to current year. Monthly discharge only for some periods, published in WSP 1318. Prior to October 1912, published as "near Hazeldell."

REVISED RECORDS.--WSP 1248: 1914-16.

GAGE.--Water-stage recorder. Datum of gage is 1,029.6 ft (313.82 m) National Geodetic Vertical Datum of 1929 (river profile survey). Oct. 1, 1909, to March 31, 1916, water-stage recorder or nonrecording gage at several sites within 0.8 mi (1.3 km) of present site at various datums. Sept. 10, 1935, to Oct. 3, 1938, nonrecording gage at present site and datum.

REMARKS.--Records good. Slight regulation by Waldo Lake; occasional fluctuations during low-water periods caused by log-ponds above station. No diversions above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--49 years (water years 1910-15, 1936-78), 792 ft³/s (22.43 m³/s), 43.72 in/yr (1,110 mm/yr), 573,800 acre-ft/yr (707 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft³/s (691 m³/s) Dec. 22, 1964, gage height, 19.14 ft (5.834 m), from floodmark, from rating curve extended above 7,100 ft³/s (201 m³/s) on basis of slope-area measurement of peak flow; minimum, 22 ft³/s (0.62 m³/s) Aug. 20, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	2300	*10,400	295	*10.88	3.316	Dec. 13	2000	9,120	258	10.15	3.094
Dec. 3	0530	5,030	142	7.57	2.307						

Minimum, 114 ft³/s (3.23 m³/s) Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	314	640	1940	1140	803	654	490	889	443	287	168	203
2	269	1040	2260	1060	976	612	520	809	426	300	165	194
3	236	841	4330	1060	2390	581	510	737	405	314	162	192
4	212	645	2950	1070	1970	590	500	689	389	307	160	197
5	200	594	2220	1070	1650	576	520	659	377	293	157	230
6	206	659	2150	1080	1490	576	515	617	361	280	154	243
7	290	626	2480	1050	1440	555	481	576	346	269	154	266
8	280	576	2090	1030	1460	581	453	546	335	263	149	263
9	243	515	1730	1040	1330	621	434	533	332	253	138	300
10	224	453	1500	1100	1180	594	439	529	405	246	141	563
11	206	413	1590	1060	1070	581	443	626	413	240	141	585
12	194	389	1790	1040	990	576	430	659	369	233	144	466
13	186	448	4990	1030	906	581	417	742	377	227	189	397
14	178	852	7180	1020	846	576	405	731	377	221	178	385
15	168	1790	7020	1030	862	555	401	945	393	218	170	346
16	165	1670	4140	1060	809	538	409	1010	377	236	230	321
17	162	1190	3250	1150	786	533	405	939	354	233	230	314
18	160	951	2530	1200	814	525	393	852	339	221	189	389
19	157	786	2010	1210	836	515	385	780	332	212	173	373
20	152	664	1670	1210	862	510	389	726	317	206	168	343
21	144	603	1440	1250	868	505	413	705	310	200	178	321
22	146	1140	1290	1330	852	510	495	659	300	194	218	307
23	154	1350	1240	1200	830	563	555	621	293	192	227	290
24	165	3470	1710	1080	809	581	555	603	297	189	215	276
25	233	6840	1720	1010	780	542	608	599	303	183	358	263
26	317	6770	1480	956	792	520	1280	559	290	183	280	253
27	266	3490	1310	889	748	515	1420	555	276	186	256	243
28	236	2500	1220	846	689	505	1200	550	266	178	236	233
29	233	2660	1240	836	---	500	1050	525	310	178	221	227
30	538	2330	1360	792	---	520	951	495	290	173	212	221
31	645	---	1260	775	---	500	---	466	---	170	203	---
TOTAL	7279	46895	75090	32674	29838	17191	17466	20931	10402	7085	5964	9204
MEAN	235	1563	2422	1054	1066	555	582	675	347	229	192	307
MAX	645	6840	7180	1330	2390	654	1420	1010	443	314	358	585
MIN	144	389	1220	775	689	500	385	466	266	170	138	192
CFSM	.96	6.35	9.85	4.29	4.33	2.26	2.37	2.74	1.41	.93	.78	1.25
IN.	1.10	7.09	11.36	4.94	4.51	2.60	2.64	3.17	1.57	1.07	.90	1.39
AC-FT	14440	93020	148900	64810	59180	34100	34640	41520	20630	14050	11830	18260

CAL YR 1977 TOTAL 240925 MEAN 660 MAX 7180 MIN 105 CFSM 2.68 IN 36.43 AC-FT 477900
WTR YR 1978 TOTAL 280019 MEAN 767 MAX 7180 MIN 138 CFSM 3.12 IN 42.34 AC-FT 555400

14148000 MIDDLE FORK WILLAMETTE RIVER BELOW NORTH FORK, NEAR OAKRIDGE, OR

LOCATION.--Lat 43°48'05", long 122°33'35", in SW¼ sec.27, T.20 S., R.2 E., Lane County, Hydrologic Unit 17090001, on left bank 0.5 mi (0.8 km) downstream from Whitehead Creek, 4.2 mi (6.8 km) downstream from North Fork of Middle Fork Willamette River, 7.0 mi (11.3 km) northwest of Oakridge, and at mile 220.2 (354.3 km).

DRAINAGE AREA.--924 mi^2 (2,393 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1911 to September 1912, July 1923 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as "near Hazeldell" 1911-12 and as "at Eula" 1923-50.

REVISED RECORDS.--WSP 694: 1925-28. WSP 814: Drainage area at Eula. WSP 1248: 1924, 1925(M), 1926-28, 1929(M), 1930, 1933, 1946(M). WSP 1398: 1927(M). WSP 1638: 1936(M).

GAGE.--Water-stage recorder. Datum of gage is 934.76 ft (284.915 m) National Geodetic Vertical Datum of 1929. Mar. 22, 1911, to Sept. 30, 1912, nonrecording gage at site 4.0 mi (6.4 km) upstream, just below North Fork at different datum. July 1, 1923, to Aug. 11, 1935, nonrecording gage and Aug. 12, 1935, to Sept. 30, 1950, water-stage recorder at site 4.0 mi (6.4 km) downstream at different datum.

REMARKS.--Water-discharge records good. Flow regulated since 1961 by Hills Creek Lake (see station 14145100); slight regulation at times by logponds above station. No diversion above station.

AVERAGE DISCHARGE.--56 years, 2,769 ft^3/s (78.42 m^3/s), 2,006,000 acre-ft/yr (2.47 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,800 ft^3/s (2,320 m^3/s) Dec. 28, 1945, gage height, 18.8 ft (5.73 m), from floodmark, site and datum then in use, from rating curve extended above 39,000 ft^3/s (1,100 m^3/s); minimum, 322 ft^3/s (9.12 m^3/s) Aug. 30, 1961, caused by closing outlet gates at Hills Creek Dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1861 and prior to beginning of record, 17.0 ft (5.18 m) in February 1890 at site used 1923-50, from information by local resident, discharge, about 55,000 ft^3/s (1,560 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,500 ft^3/s (637 m^3/s) Nov. 26, gage height, 7.68 ft (2.341 m); minimum, 463 ft^3/s (13.1 m^3/s) Oct. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1100	1730	8570	6870	1970	1650	1450	2200	1330	1290	772	1870
2	869	2520	9050	6660	2290	1590	1480	2040	1410	1410	879	1860
3	781	2260	14400	6660	6080	1540	1450	1910	1650	1560	1020	1860
4	620	2040	11300	6560	5490	1540	1430	1820	1730	1540	1110	1870
5	587	2620	9090	5890	4590	1540	1440	1760	1670	1430	1110	1940
6	595	2770	7460	5070	4170	1550	1410	1650	1680	1310	1110	1990
7	716	2270	8470	4930	4250	1480	1390	1560	1810	1190	1100	2020
8	698	1370	7580	4820	5050	1520	1330	1510	1990	1180	1090	2040
9	637	1250	6660	4110	4650	1670	1290	1480	1970	1180	1510	2150
10	604	1330	6270	4170	4330	1620	1280	1480	2060	1150	1710	2620
11	579	2200	6370	3900	3760	1580	1280	1620	1760	1070	1710	2660
12	550	2310	6600	3760	3440	1560	1270	1680	1520	1010	1740	2480
13	540	2410	12100	3840	2830	1560	1240	1810	1550	985	1820	2310
14	527	2900	16000	3790	2020	1550	1210	1840	1580	1010	1820	2310
15	519	4760	17200	3640	2040	1510	1210	2420	1590	1030	1820	2240
16	503	4850	11600	3760	1910	1730	1230	2440	1550	1040	1920	2170
17	503	3900	9740	4000	1890	1960	1210	2270	1480	1050	1910	2150
18	495	3390	8680	4030	1940	1960	1180	2110	1330	1020	1860	2330
19	487	3080	11100	4060	2020	1940	1160	1970	1290	1010	1820	2310
20	487	2880	10200	4250	2060	1700	1180	1890	1330	951	1810	2220
21	479	2810	8370	4650	2060	1410	1210	1860	1290	889	1810	2170
22	471	4080	6970	4930	2010	1440	1400	1770	1280	839	1920	2130
23	487	4710	6830	3980	1970	1550	1450	1680	1240	839	1790	2090
24	511	8940	7820	3900	1920	1580	1440	1640	1240	889	1940	2040
25	725	15300	7920	4170	1860	1480	1640	1620	1270	899	2260	2010
26	879	17700	7350	3900	1860	1450	3240	1540	1240	879	2060	1960
27	879	10400	7000	3390	1810	1450	3240	1520	1180	879	1970	1910
28	1330	7970	6870	2660	1710	1440	2810	1520	1150	879	1940	1910
29	1330	10100	7000	2660	---	1440	2480	1510	1290	790	1910	1860
30	1840	9520	7280	2580	---	1480	2290	1440	1310	744	1910	1840
31	1890	---	7140	2060	---	1470	---	1390	---	734	1890	---
TOTAL	23218	144370	278990	133650	81980	48940	47320	54950	44770	32676	51041	63320
MEAN	749	4812	9000	4311	2928	1579	1577	1773	1492	1054	1646	2111
MAX	1890	17700	17200	6870	6080	1960	3240	2440	2060	1560	2260	2660
MIN	471	1250	6270	2060	1710	1410	1160	1390	1150	734	772	1840
AC-FT	46050	286400	553400	265100	162600	97070	93860	109000	88800	64810	101200	125600

CAL YR 1977 TOTAL 820945 MEAN 2249 MAX 17700 MIN 471 AC-FT 1628000
WTR YR 1978 TOTAL 1005225 MEAN 2754 MAX 17700 MIN 471 AC-FT 1994000

14148000 MIDDLE FORK WILLAMETTE RIVER BELOW NORTH FORK, NEAR OAKRIDGE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: September 1950 to October 1960, June 1961 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 23.5°C Aug. 3, 1961; minimum, 0.0°C Jan. 20-22, 1962.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 20.0°C July 23, 29, 30; minimum, 5.0°C Jan. 1, Mar. 1-3.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.0	11.5	11.5	10.0	9.0	8.5	5.5	5.0	8.5	7.5	9.0	5.0
2	13.5	12.0	11.0	9.5	9.5	9.0	6.0	5.5	8.5	7.5	8.5	5.0
3	14.5	11.5	9.5	8.5	9.0	9.0	6.5	6.0	9.0	7.0	9.5	5.0
4	13.5	10.5	10.0	8.5	9.0	8.0	6.5	6.0	9.0	7.5	9.5	6.5
5	13.5	11.0	11.0	10.5	8.5	8.0	6.5	6.0	10.0	8.5	9.5	6.5
6	12.0	11.5	11.5	10.5	9.0	8.0	6.5	6.0	9.5	8.0	10.0	7.5
7	12.5	11.0	11.0	8.5	8.5	7.0	6.0	5.5	9.5	8.0	9.5	7.5
8	12.5	10.5	8.5	7.5	7.0	6.5	7.0	6.0	8.5	7.5	9.0	8.0
9	13.0	10.5	7.5	6.5	7.5	6.5	7.0	6.5	8.5	7.5	---	7.0
10	12.5	10.0	9.5	7.0	8.0	7.0	6.5	6.5	8.5	6.5	12.0	8.5
11	13.0	9.5	10.5	9.0	8.0	8.0	6.0	5.5	7.5	6.0	11.5	9.0
12	13.0	10.0	11.0	10.0	8.0	7.5	6.0	6.0	7.0	6.0	11.0	7.5
13	13.5	11.0	11.0	10.5	8.5	8.0	6.5	6.0	9.5	6.0	---	---
14	13.5	11.0	10.5	10.0	9.0	8.5	6.5	6.0	8.5	7.5	---	---
15	14.0	11.0	10.0	9.5	8.5	6.5	7.0	6.5	8.5	7.5	---	---
16	13.0	10.5	9.5	9.0	6.5	6.0	7.0	6.5	8.5	7.0	---	---
17	13.5	11.0	9.0	8.5	6.5	6.5	7.0	6.5	8.5	6.5	---	---
18	13.0	10.5	8.5	7.0	6.5	6.0	6.5	6.0	10.0	7.5	---	---
19	13.0	11.0	7.5	6.5	6.5	6.0	7.0	6.5	10.5	8.5	---	---
20	12.0	10.5	7.0	6.0	6.5	6.0	8.5	6.5	11.0	9.0	---	---
21	12.0	10.0	7.0	6.5	7.0	6.5	8.5	7.5	11.5	9.5	---	---
22	11.5	9.0	7.0	7.0	7.0	6.5	8.5	7.0	11.5	9.5	---	---
23	12.0	10.0	7.5	7.0	7.0	7.0	8.5	7.0	11.5	9.5	---	---
24	13.5	11.0	8.0	7.5	7.0	7.0	8.0	6.5	11.5	8.5	---	---
25	12.5	11.5	9.0	8.0	7.0	6.5	8.5	7.0	11.0	7.5	---	---
26	12.0	10.5	8.5	8.0	6.5	6.0	8.5	7.0	10.5	7.0	---	---
27	11.5	10.0	8.5	8.0	7.0	6.0	7.0	6.0	9.5	7.0	---	---
28	12.5	11.5	8.5	8.0	7.0	6.5	8.5	8.0	9.0	5.5	---	---
29	12.5	11.5	9.0	8.5	7.0	6.5	8.5	8.0	---	---	---	---
30	12.0	11.0	9.0	8.5	6.5	6.0	8.5	7.5	---	---	---	---
31	11.0	10.0	---	---	6.0	5.5	8.5	8.0	---	---	---	---
MONTH	14.5	9.0	11.5	6.0	9.5	5.5	8.5	5.0	11.5	5.5	12.0	5.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	10.5	8.5	16.0	10.5	15.0	12.5	19.0	13.5	14.5	12.0
2	---	---	11.0	8.0	16.0	11.0	13.5	11.5	18.5	12.5	15.5	12.0
3	---	---	10.5	7.5	15.5	11.0	12.0	11.0	17.5	13.0	14.0	12.0
4	---	---	9.0	7.5	16.0	10.5	15.5	11.0	17.0	12.5	12.5	12.0
5	---	---	10.0	6.5	16.5	11.5	16.0	11.5	17.0	11.5	13.0	11.5
6	---	---	11.0	7.0	16.0	11.5	17.5	12.0	17.5	12.0	13.0	12.0
7	---	---	12.0	7.5	15.0	11.0	18.0	13.0	18.0	12.5	13.5	12.0
8	---	---	13.0	8.5	15.0	11.0	17.5	13.0	18.0	12.5	13.5	11.5
9	---	---	11.0	10.0	13.0	10.5	16.5	12.5	15.5	12.0	14.0	12.5
10	---	---	11.0	9.0	11.5	10.0	16.5	12.5	14.5	11.0	13.5	12.5
11	---	---	11.0	9.0	14.5	10.0	17.0	11.5	14.5	11.5	14.0	12.0
12	---	---	10.5	8.5	13.5	11.5	18.0	12.0	12.5	11.0	14.0	11.5
13	---	---	12.0	9.5	13.5	10.5	18.5	13.0	12.5	11.0	13.0	12.0
14	---	---	11.0	9.5	13.5	10.5	19.5	14.0	14.0	10.5	15.0	12.5
15	---	---	10.0	8.5	14.5	10.0	16.5	14.5	12.0	10.5	14.5	12.5
16	---	---	11.5	8.5	15.5	10.0	17.0	13.0	12.0	10.5	13.5	12.0
17	---	---	12.0	8.0	16.0	10.5	17.5	12.5	13.0	10.5	13.0	12.0
18	---	---	13.5	8.5	14.0	12.0	18.0	12.5	13.5	10.5	12.5	11.5
19	---	---	13.0	9.5	17.0	11.0	18.5	12.5	14.0	10.5	14.0	11.5
20	---	---	14.5	10.5	17.5	12.0	18.5	13.0	11.5	11.0	14.0	11.5
21	---	---	12.5	9.5	16.0	12.5	19.5	13.0	12.0	11.0	14.0	12.5
22	---	---	11.5	8.0	17.0	11.5	19.5	14.0	12.0	11.0	14.0	12.0
23	---	---	11.0	8.5	13.5	11.5	20.0	14.5	13.0	11.0	15.0	12.5
24	---	---	10.0	8.5	13.0	11.0	19.5	14.5	12.5	11.5	15.0	12.5
25	---	---	11.0	8.0	12.5	11.0	19.0	14.5	13.5	11.5	14.5	13.0
26	---	---	10.5	9.0	16.5	10.5	18.0	15.0	14.0	11.0	15.0	12.5
27	10.5	---	12.5	9.5	17.5	12.0	17.5	13.5	14.0	11.0	15.0	13.0
28	10.5	8.5	13.0	10.0	17.0	12.5	18.0	13.5	14.5	11.5	15.0	13.0
29	11.0	7.5	14.0	9.5	14.0	12.5	20.0	13.5	15.0	11.5	15.0	12.5
30	10.0	8.5	14.0	9.0	15.5	12.0	20.0	14.5	13.0	12.0	14.5	13.0
31	---	---	15.0	9.5	---	---	19.5	14.0	13.5	12.0	---	---
MONTH	11.0	7.5	15.0	6.5	17.5	10.0	20.0	11.0	19.0	10.5	15.5	11.5

14149000 LOOKOUT POINT LAKE NEAR LOWELL, OR

LOCATION.--Lat 43°54'50", long 122°45'00", SE¼ sec.13, T.19 S., R.1 W., Lane County, Hydrologic Unit 17090001, in elevator house at right end of spillway section of dam on Middle Fork Willamette River, 1.5 mi (2.4 km) east of Lowell, and at mile 206.9 (332.9 km).

DRAINAGE AREA.--991 mi^2 (2,567 km^2).

PERIOD OF RECORD.--November 1953 to current year. Prior to October 1971, published as Lookout Point Reservoir near Lowell.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Nov. 7, 1953, to Dec. 4, 1954, approximate elevations obtained from reference marks and Dec. 5, 1954, to Feb. 4, 1955, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam with concrete gate and spillway section, completed in 1954 by Corps of Engineers. Planned storage began in November 1953. Total capacity is 455,800 acre-ft (562 hm^3) at elevation 929 ft (283.2 m), and usable capacity is 349,200 acre-ft (431 hm^3) between elevations 819 ft (249.6 m), and 929 ft (283.2 m), top of spillway gates. Reservoir used for flood control, improvement of navigation, power generation, pollution abatement, and other purposes. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 464,900 acre-ft (573 hm^3) Dec. 26, 1964, elevation, 931.09 ft (283.796 m); minimum observed since first filling, 91,450 acre-ft (113 hm^3) Dec. 1, 1954, elevation, 811.00 ft (247.193 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 347,400 acre-ft (428 hm^3) July 11, elevation, 902.24 ft (275.003 m); minimum, 123,300 acre-ft (152 hm^3) Jan. 27, 28, elevation, 827.17 ft (252.121 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)

820	108,600	860	205,500	900	338,900
830	129,500	870	235,500	910	377,400
840	152,500	880	267,800	920	417,800
850	117,700	890	302,300	930	460,200

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	895.20	863.44	873.78	852.83	828.97	859.65	867.41	879.12	894.44	900.47	898.73	891.41
2	895.16	862.98	873.50	851.31	830.12	859.90	867.65	879.79	894.72	900.68	898.36	891.27
3	894.89	862.26	878.88	850.73	834.88	859.99	867.82	880.36	895.14	900.96	897.98	891.03
4	894.35	861.26	878.40	848.31	838.47	859.67	868.03	880.88	895.60	901.30	897.61	890.93
5	893.44	861.10	876.68	846.46	840.99	860.47	868.27	881.38	895.94	901.50	897.24	890.79
6	892.16	861.64	874.12	843.95	843.06	860.83	868.43	881.78	896.34	901.66	896.86	890.63
7	890.90	862.31	872.68	841.28	844.35	860.99	868.57	882.15	896.80	901.76	896.21	890.41
8	889.58	862.84	870.23	838.57	846.34	861.17	868.65	882.60	897.40	901.90	895.77	890.09
9	888.22	863.10	867.09	835.36	847.62	861.46	868.70	882.90	897.99	902.01	895.52	889.85
10	886.80	863.39	863.42	834.01	848.61	861.74	868.96	883.23	898.69	902.08	895.05	889.99
11	885.33	863.84	859.98	833.19	849.65	862.02	868.91	883.72	899.15	902.05	894.61	889.78
12	883.85	864.03	856.53	832.39	850.60	862.28	868.96	884.22	899.37	902.07	894.24	889.24
13	882.38	863.61	861.75	831.69	850.99	862.53	868.97	884.72	899.59	902.05	893.88	888.61
14	880.89	863.07	873.00	830.86	851.60	862.78	868.99	885.36	899.85	902.01	893.49	887.95
15	879.34	863.13	883.35	829.87	852.33	862.97	869.07	886.40	900.05	902.05	893.32	887.23
16	878.40	862.47	888.72	829.14	853.00	863.29	869.12	887.42	900.11	902.06	893.11	886.88
17	877.00	861.22	893.22	829.25	853.60	863.83	869.14	888.22	900.36	902.02	893.07	886.62
18	875.33	859.62	893.54	829.03	854.23	864.34	869.19	888.94	900.33	902.01	892.84	885.99
19	873.79	857.89	893.15	829.27	854.89	864.81	869.31	889.52	900.40	901.98	892.67	885.29
20	872.51	855.97	892.06	828.20	855.59	865.14	869.42	890.00	900.43	901.94	892.58	884.55
21	871.41	854.11	889.60	828.77	856.29	865.26	869.93	890.60	900.40	901.85	892.50	883.76
22	870.57	852.97	885.66	830.51	856.81	865.41	870.27	891.10	900.43	901.73	892.52	882.91
23	869.75	850.53	881.49	830.79	857.27	865.77	870.62	891.52	900.42	901.61	892.30	882.13
24	868.89	852.62	877.93	828.76	857.79	866.05	870.95	892.90	900.46	901.47	892.32	881.42
25	867.98	863.24	874.38	828.89	858.23	866.22	871.52	892.30	900.41	901.25	892.48	880.49
26	867.11	874.73	870.23	828.21	858.68	866.40	873.10	892.66	900.40	901.00	892.53	879.71
27	866.22	877.39	865.63	827.40	859.07	866.57	874.88	893.00	900.37	900.67	892.53	878.75
28	865.49	876.68	361.50	827.57	859.41	866.71	876.23	893.36	900.33	900.33	892.27	877.78
29	864.79	876.88	858.30	827.72	---	866.87	877.32	893.70	900.25	899.94	892.20	876.76
30	864.52	875.70	855.20	827.83	---	867.06	878.26	893.80	900.35	899.62	892.12	876.21
31	864.23	---	854.12	828.21	---	867.22	---	894.24	---	899.16	891.96	---
MEAN	879.05	863.13	874.13	834.21	849.77	863.53	870.22	887.16	898.88	901.39	894.16	885.95
MAX	895.20	877.39	893.54	852.83	859.41	867.22	878.26	894.24	900.46	902.08	898.73	891.41
MIN	864.23	850.53	854.12	827.40	828.97	859.65	867.41	879.12	894.44	899.16	891.96	876.21
(†)	217,900	253,700	188,900	125,600	203,800	227,000	262,100	317,600	340,200	335,700	309,300	255,300
(‡)	-102,900	+35,800	-64,800	-63,300	+78,200	+23,200	+35,100	+55,500	+22,600	-4,500	-26,400	-54,000

CAL YR 1977 MEAN 873.00 MAX 913.72 MIN 820.55 AC-FT‡ +70,000
WTR YR 1978 MEAN 875.29 MAX 902.08 MIN 827.40 AC-FT‡ -65,500

† Contents, in acre-feet, at 2400, on last day of month.
‡ Change in contents, in acre-feet.

14150000 MIDDLE FORK WILLAMETTE RIVER NEAR DEXTER, OR

LOCATION.--Lat 43°56'45", long 122°50'10", in SE¼NW¼ sec.5, T.19 S., R.1 W., Lane County, Hydrologic Unit 17090001, on right bank 0.6 mi (1.0 km) upstream from Lost Creek, 2.0 mi (3.2 km) northwest of Dexter, 2.6 mi (4.2 km) downstream from Dexter Dam, and at mile 201.2 (323.7 km).

DRAINAGE AREA.--1,001 mi^2 (2,593 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1946 to September 1954 (published as "at Lowell"), June 1955 to current year. Monthly discharge only for October 1954 to June 1955, published in WSP 1738.

REVISED RECORDS.--WSP 1638: 1948(P).

GAGE.--Water-stage recorder. Datum of gage is 592.30 ft (180.533 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Aug. 23, 1950, nonrecording gage and Aug. 23, 1950, to Sept. 30, 1954, at site 4.0 mi (6.4 km) upstream at different datum, and June 9, 1955, to Feb. 18, 1977, at datum 3.00 ft (0.914 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since 1953 by Lookout Point Lake (see station 14149000), since 1955 by Dexter Lake (re-regulating), and since 1961 by Hills Creek Lake (see station 14145100).

AVERAGE DISCHARGE.--32 years, 3,194 ft^3/s (83.09 m^3/s), 2,314,000 acre-ft/yr (2.85 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,600 ft^3/s (1,770 m^3/s) Jan. 18, 1953, gage height, 12.46 ft (3.798 m), site and datum then in use, from rating curve extended above 33,000 ft^3/s (935 m^3/s); minimum daily, 100 ft^3/s (2.83 m^3/s) Nov. 25, 1960.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 13.9 ft (4.24 m) Dec. 28, 1945, former site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,100 ft^3/s (399 m^3/s) Dec. 20, 24, gage height, 10.48 ft (3.194 m); minimum, 798 ft^3/s (22.6 m^3/s) July 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1530	3170	12000	9020	1440	1170	1220	962	946	970	1540	2510
2	1150	3290	10300	9120	1360	1250	1230	962	946	978	1600	2110
3	1160	3390	5370	9050	1550	1290	1230	962	946	995	1620	2100
4	1380	3680	12100	9000	1770	1290	1220	970	938	1000	1650	2100
5	1910	3320	12100	8840	1840	1280	1220	1000	938	995	1710	2120
6	2760	1940	12100	8820	1770	1260	1220	987	938	987	1700	2290
7	3010	1510	11200	8450	2510	1230	1210	987	946	970	1770	2370
8	2930	962	11700	8240	2630	1220	1210	978	946	970	1780	2350
9	2940	1070	11700	8300	3100	1220	1210	978	938	962	1770	2350
10	2990	1190	12000	6240	3090	1200	1210	978	1140	962	2430	2560
11	3110	1410	11900	4830	2440	1220	1200	978	1140	1010	2510	2940
12	3160	2270	11900	4610	2350	1260	1210	978	1140	962	2500	3350
13	3170	3070	5710	4610	2300	1320	1210	970	1140	938	2440	3350
14	2960	3960	1100	4720	1310	1310	1210	970	1140	930	2320	3360
15	3000	5050	1100	4850	1280	1310	1210	970	1190	962	2170	3360
16	2640	5980	2150	4780	1250	1250	1210	970	1190	978	2020	3070
17	2600	6130	1300	4420	1230	1210	1210	970	1200	1010	1980	2960
18	3030	6150	8570	4300	1210	1200	1200	962	1180	1020	1980	2960
19	3060	6070	11900	4300	1200	1200	1040	962	1240	1010	1970	3160
20	2500	5780	11900	4290	1190	1200	995	962	1260	1000	1970	3480
21	2130	5890	12800	4290	1200	1200	987	970	1260	995	1980	3550
22	1860	6520	13900	4270	1340	1210	978	962	1260	995	1990	3550
23	1660	9230	13900	4270	1410	1360	970	962	1260	987	1980	3290
24	1900	8080	14000	4270	1400	1340	970	962	1250	1040	1980	3290
25	2210	2140	13900	4270	1320	1340	970	962	1250	1200	1980	3300
26	2270	1050	13900	4270	1320	1290	970	962	1260	1310	1980	3420
27	2280	4540	14000	4270	1310	1230	970	954	1250	1420	1980	3440
28	2430	9850	13000	2730	1290	1230	962	954	1250	1540	1970	3450
29	2550	10200	12000	2280	---	1230	962	954	1270	1540	1980	3450
30	2390	11600	12000	2180	---	1230	962	954	1140	1540	1980	2820
31	2380	---	9020	1720	---	1230	---	946	---	1540	2350	---
TOTAL	75050	138492	320520	169610	47410	38780	33576	29998	33892	33716	61580	88410
MEAN	2421	4616	10340	5471	1693	1251	1119	968	1130	1088	1986	2947
MAX	3170	11600	14000	9120	3100	1360	1230	1000	1270	1540	2510	3550
MIN	1150	962	1100	1720	1190	1170	962	946	938	930	1540	2100
AC-FT	148900	274700	635800	336400	94040	76920	66600	59500	67220	66880	122100	175400

CAL YR 1977 TOTAL 812246 MEAN 2225 MAX 14000 MIN 338 AC-FT 1611000
WTR YR 1978 TOTAL 1071034 MEAN 2934 MAX 14000 MIN 930 AC-FT 2124000

14150000 MIDDLE FORK WILLAMETTE RIVER NEAR DEXTER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1955 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 18.5°C Sept. 17, 21, 22, 24, 25, 1961; minimum, 3.5°C on several days in 1957, 1969, and Jan. 9-11, 1973.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 17.0°C many days in August and September; minimum recorded, 6.0°C Jan. 18-22.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.0	14.5	14.0	13.5	8.5	8.5	6.5	6.5			---	---
2	15.5	14.5	14.0	13.0	9.0	8.5	6.5	6.5			---	---
3	16.0	14.5	13.5	12.5	9.0	9.0	6.5	6.5			---	---
4	15.5	14.5	13.0	12.5	9.0	8.5	6.5	6.5			---	---
5	15.5	14.5	12.5	12.5	8.5	8.5	6.5	6.5			---	---
6	15.0	14.5	13.0	12.5	9.0	8.5	6.5	6.5			---	---
7	15.0	14.5	12.5	12.0	8.5	8.5	6.5	6.5			8.0	7.5
8	15.0	14.5	12.5	12.0	8.5	8.0	6.5	6.5			8.0	7.5
9	15.0	14.5	12.5	11.5	8.5	8.0	6.5	6.5			8.5	7.0
10	15.0	14.5	12.5	11.5	8.5	8.0	6.5	6.5			8.0	7.0
11	15.0	14.5	11.5	11.0	8.5	8.0	6.5	6.5			8.0	7.5
12	15.0	14.5	12.0	11.0	8.0	8.0	6.5	6.5			9.0	7.0
13	15.0	14.5	11.5	11.0	8.5	8.0	6.5	6.5			8.5	7.5
14	15.5	14.5	11.5	11.5	9.0	8.5	6.5	6.5			9.0	7.0
15	15.5	14.5	11.5	11.5	9.0	8.5	6.5	6.5			9.0	7.0
16	15.5	14.5	11.5	11.5	8.5	8.0	7.0	6.5			9.5	7.5
17	15.5	14.5	11.5	11.0	8.5	8.0	7.0	6.5			10.0	7.5
18	15.0	14.5	11.0	11.0	8.0	7.5	6.5	6.0			10.0	8.0
19	15.0	14.5	11.0	10.5	7.5	7.5	6.5	6.0			10.5	8.0
20	14.5	14.5	10.5	10.0	7.5	7.5	6.5	6.0			10.5	8.5
21	15.5	14.5	10.0	10.0	7.5	7.5	6.5	6.0			10.0	8.5
22	15.0	14.0	10.0	10.0	7.5	7.5	7.0	6.0			10.5	8.5
23	15.0	14.5	10.0	9.5	7.5	7.0	7.0	6.5			10.0	9.0
24	15.5	14.5	9.5	9.5	7.0	7.0	7.0	6.5			10.0	9.0
25	15.0	14.5	10.5	9.5	7.0	7.0	7.0	6.5			10.5	9.0
26	15.0	14.0	10.5	9.5	7.0	7.0	7.0	---			10.5	9.0
27	14.5	14.0	10.0	9.5	7.0	7.0	---	---			11.0	8.5
28	14.0	14.0	9.5	9.0	7.0	7.0	---	---			10.0	9.0
29	14.0	14.0	9.0	9.0	7.0	7.0	---	---			10.0	9.0
30	14.0	13.5	9.0	8.5	7.0	6.5	---	---			10.0	9.0
31	13.5	13.5	---	---	7.0	6.5	---	---			10.0	9.0
MONTH	16.0	13.5	14.0	8.5	9.0	6.5	7.0	6.0			11.0	7.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.0	9.0	11.5	10.0	14.5	11.5	13.0	12.0	16.5	13.5	17.0	15.5
2	10.0	9.0	12.0	10.0	15.0	11.5	13.5	12.0	16.5	13.5	17.0	15.5
3	11.0	9.5	12.5	10.0	14.5	11.5	13.0	12.5	17.0	13.5	16.0	15.5
4	10.5	9.5	12.0	10.0	15.5	11.5	14.0	12.5	16.0	14.0	15.5	15.5
5	10.5	9.0	12.5	9.5	15.0	11.5	15.0	12.0	16.5	13.5	15.5	15.0
6	11.0	9.0	13.5	10.0	15.0	11.5	15.0	12.0	16.5	14.0	15.5	15.0
7	10.5	9.0	13.5	10.5	14.5	11.5	15.0	12.5	17.0	14.0	16.0	15.0
8	11.0	9.0	13.5	10.5	14.5	11.5	13.5	12.5	16.5	14.0	15.5	15.0
9	11.5	9.0	12.5	11.0	13.5	12.0	13.5	12.5	17.0	14.0	15.5	15.0
10	12.0	9.5	12.0	10.5	13.0	12.0	15.0	12.5	16.5	14.0	15.5	15.0
11	12.0	9.0	12.5	11.0	15.5	12.0	15.0	12.5	16.5	15.0	15.5	15.0
12	12.0	9.5	12.5	11.0	14.0	12.0	15.5	12.5	15.5	15.0	16.0	14.5
13	11.0	9.5	12.0	11.0	14.5	12.0	16.0	12.5	16.0	15.0	15.5	15.0
14	11.0	9.5	12.0	10.5	14.0	12.0	16.0	13.0	17.0	15.0	15.5	15.0
15	10.5	10.0	13.0	10.5	14.5	12.5	13.5	13.0	15.5	15.0	16.0	15.0
16	11.0	9.5	13.0	10.5	15.0	12.5	14.0	13.0	15.5	15.0	15.5	15.0
17	11.0	10.0	13.5	10.5	15.0	12.0	15.5	13.0	15.5	14.5	15.5	15.0
18	11.5	9.5	13.5	10.5	13.0	12.5	16.0	12.5	16.5	14.5	15.5	14.5
19	11.0	9.5	13.5	11.0	15.0	12.0	16.0	13.0	15.5	15.0	15.5	14.5
20	11.5	9.5	14.0	11.0	14.5	12.0	16.5	13.0	15.5	15.0	15.5	14.5
21	11.5	10.0	12.0	11.0	13.5	12.5	16.0	13.0	15.5	15.0	15.5	14.5
22	10.5	9.5	13.0	10.5	14.5	12.0	16.0	13.0	15.5	15.0	15.5	14.5
23	11.5	9.5	13.0	11.0	13.0	12.0	16.5	13.0	16.0	15.0	15.5	14.5
24	11.5	10.0	13.0	11.5	14.0	12.5	16.5	13.0	15.5	15.0	15.5	14.5
25	11.0	10.0	13.0	11.5	13.5	12.0	16.5	13.0	16.0	15.0	15.5	14.5
26	11.0	10.0	12.5	11.5	14.5	12.0	15.5	13.5	16.5	14.5	15.5	15.0
27	11.5	10.0	12.5	11.0	15.5	12.0	16.0	13.5	16.5	15.0	15.5	15.0
28	12.0	10.0	12.5	11.0	14.0	12.5	16.0	13.5	17.0	15.0	16.0	14.5
29	13.0	10.0	13.5	10.5	13.5	12.5	16.5	13.5	17.0	15.0	15.5	14.5
30	11.0	10.0	14.0	11.0	14.0	12.5	16.5	13.5	15.5	15.0	15.5	15.0
31	---	---	14.0	11.0	---	---	16.5	13.5	16.0	15.0	---	---
MONTH	13.0	9.0	14.0	9.5	15.5	11.5	16.5	12.0	17.0	13.5	17.0	14.5

14150300 FALL CREEK NEAR LOWELL, OR

LOCATION.--Lat 43°58'15", long 122°38'15", in SW¼ sec.25, T.18 S., R.1 E., Lane County, Hydrologic Unit 17090001, on right bank 0.1 mi (0.2 km) downstream from North Fork, 8.0 mi (12.9 km) northeast of Lowell, and at mile 14.4 (23.2 km).

DRAINAGE AREA.--118 mi² (306 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 844.42 ft (257.379 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--15 years, 419 ft³/s (11.87 m³/s), 48.22 in/yr (1,225 mm/yr), 303,600 acre-ft/yr (374 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,100 ft³/s (343 m³/s) Jan. 21, 1972, which may have been caused by release from breakup of temporary logjam 12 mi (19 km) upstream, gage height, 11.84 ft (3.609 m); minimum, 16 ft³/s (0.45 m³/s) Oct. 3, 4, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	2030	*9,410	266	*10.57	3.222	Dec. 14	1930	6,640	188	8.69	2.649
Dec. 3	0130	4,070	115	6.91	2.106						

Minimum, 29 ft³/s (0.82 m³/s) Aug. 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	446	1070	624	416	216	128	441	184	87	39	65
2	114	701	1640	536	624	204	171	379	166	95	38	60
3	94	451	3030	536	2290	198	195	326	152	113	38	55
4	80	312	1540	531	1230	204	184	294	145	132	37	60
5	73	326	1050	570	850	201	231	274	138	134	35	120
6	71	495	1060	624	671	193	257	244	130	123	35	150
7	200	413	1870	560	655	190	231	222	123	97	34	154
8	170	337	1340	508	776	207	201	201	117	85	32	147
9	100	274	936	472	650	237	182	190	117	79	31	177
10	90	224	725	467	541	216	171	190	193	77	30	629
11	75	192	776	433	463	207	159	308	193	72	30	719
12	70	169	949	445	412	216	147	319	145	70	40	375
13	65	239	2670	441	363	264	141	315	141	66	61	260
14	63	712	4050	433	333	294	136	322	149	61	47	237
15	60	1610	4350	428	412	264	134	634	207	61	60	195
16	55	1070	2770	472	403	237	152	692	171	87	120	161
17	53	634	2690	619	441	219	161	550	147	83	170	149
18	50	468	1760	703	472	198	147	424	134	66	80	213
19	49	363	1160	692	459	182	145	340	126	59	65	190
20	47	291	876	697	412	169	156	287	115	56	60	159
21	46	261	697	876	359	161	231	250	109	52	75	141
22	43	960	599	1220	319	154	433	225	107	50	90	126
23	63	1450	594	902	291	201	584	216	101	49	170	115
24	70	3150	1190	681	271	184	428	204	107	47	105	105
25	187	5340	1090	565	250	161	407	219	115	45	320	97
26	319	4220	788	504	277	149	1420	198	113	45	150	92
27	192	1880	629	437	254	145	1150	237	107	45	110	87
28	139	1270	536	399	231	138	747	344	95	44	85	82
29	132	1760	574	375	---	136	570	291	92	43	75	79
30	504	1380	794	340	---	136	476	241	92	42	70	75
31	597	---	770	344	---	132	---	207	---	40	70	---
TOTAL	4025	31398	44573	17434	15125	6013	9875	9584	4031	2205	2402	5274
MEAN	130	1047	1438	562	540	194	329	309	134	71.1	77.5	176
MAX	597	5340	4350	1220	2290	294	1420	692	207	134	320	719
MIN	43	169	536	340	231	132	128	190	92	40	30	55
CFSM	1.10	8.87	12.2	4.76	4.58	1.64	2.79	2.62	1.14	.60	.66	1.49
IN.	1.27	9.90	14.05	5.50	4.77	1.90	3.11	3.02	1.27	.70	.76	1.66
AC-FT	7980	62280	88410	34580	30000	11930	19590	19010	8000	4370	4760	10460

CAL YR 1977 TOTAL 140948 MEAN 386 MAX 5340 MIN 22 CFSM 3.27 IN 44.43 AC-FT 279600
WTR YR 1978 TOTAL 151939 MEAN 416 MAX 5340 MIN 30 CFSM 3.53 IN 47.90 AC-FT 301400

14150300 FALL CREEK NEAR LOWELL, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: August 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: Maximum, 24.5°C Aug. 11, 1971; minimum, 0.0°C Dec. 7, 8, 1972, Jan. 8, 1973, Feb. 6, 1976, Jan. 6-10, 27-30, 1977.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum, 22.5°C Aug. 8, 9; minimum recorded, 3.0°C Nov. 20.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	10.0	10.5	9.5	9.5	9.0	6.0	5.0			---	---
2	11.5	10.5	10.0	8.0	10.0	9.5	6.5	5.5			---	---
3	11.5	10.5	8.0	7.0	10.0	9.5	7.5	6.0			---	---
4	11.0	9.5	7.5	6.0	9.5	8.5	7.5	6.5			---	---
5	11.5	10.5	8.5	7.5	8.5	8.0	7.5	7.0			---	---
6	10.5	10.0	9.0	8.5	9.5	8.5	8.0	7.0			8.5	7.5
7	11.5	10.5	9.0	7.5	9.0	7.5	8.0	7.0			8.5	8.0
8	10.5	9.5	7.5	6.0	7.5	6.5	8.5	8.0			9.0	8.0
9	10.5	9.0	6.5	5.5	8.0	6.5	8.5	8.0			9.0	8.0
10	10.0	9.0	7.5	6.5	8.5	8.0	8.5	8.0			8.0	7.0
11	10.5	9.0	8.0	7.0	9.0	8.5	8.0	7.0			7.5	6.5
12	11.0	9.5	8.0	7.5	9.0	8.5	8.0	7.0			6.5	6.0
13	12.0	10.5	8.5	8.0	10.0	9.0	8.5	8.0			7.0	6.0
14	12.5	11.5	9.0	8.0	10.0	9.5	9.0	8.0			6.5	5.5
15	12.0	11.0	10.0	9.0	9.5	7.5	8.5	8.0			6.5	4.5
16	11.5	10.5	9.5	8.0	8.0	7.5	8.5	7.5			7.5	5.5
17	11.5	10.0	8.0	7.0	8.0	7.5	7.5	7.0			8.5	6.5
18	11.0	10.0	7.0	5.5	7.5	7.0	7.0	6.5			9.0	7.0
19	11.0	9.5	5.5	4.0	6.5	6.0	7.5	7.0			9.5	7.5
20	10.5	9.5	4.0	3.0	7.0	6.0	8.0	7.5			9.5	7.5
21	10.5	9.0	4.5	4.0	7.5	7.0	7.5	6.5			10.0	8.0
22	10.0	8.5	6.5	4.5	8.0	7.0	6.5	6.0			10.0	8.0
23	11.0	9.5	7.5	6.5	8.0	7.5	---	5.0			10.0	8.5
24	11.5	10.5	9.0	7.5	8.5	7.5	---	---			9.0	8.0
25	11.5	11.0	10.5	9.5	8.0	7.0	---	---			10.0	8.0
26	11.0	10.0	10.0	9.0	7.5	6.5	---	---			10.0	8.5
27	10.5	9.5	9.5	9.0	7.5	6.5	---	---			10.5	8.5
28	10.0	9.0	9.0	8.5	8.0	7.0	---	---			10.0	8.5
29	9.5	9.0	10.0	9.0	8.0	7.0	---	---			11.0	9.5
30	9.5	9.0	10.0	9.0	7.5	6.5	---	---			11.0	10.0
31	10.0	9.0	---	---	7.0	5.5	---	---			10.0	9.0
MONTH	12.5	8.5	10.5	3.0	10.0	5.5	9.0	5.0			11.0	4.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.5	8.0	9.5	8.0	14.5	11.0	15.0	14.0	19.5	14.0	17.0	14.5
2	8.0	7.0	9.5	8.0	15.5	12.0	13.5	13.0	20.0	16.5	17.5	15.5
3	8.5	6.5	10.0	8.0	16.0	12.5	13.0	12.5	20.5	17.0	16.5	15.0
4	8.5	7.5	8.5	7.5	17.5	13.5	15.5	12.5	20.5	17.5	15.0	13.5
5	7.5	7.0	8.5	6.5	18.0	14.5	16.5	13.0	20.0	16.5	13.5	13.0
6	8.0	6.0	10.0	6.5	18.0	15.0	17.5	13.5	20.5	16.5	13.5	12.5
7	7.0	5.5	11.0	8.0	17.5	13.5	17.5	14.5	21.5	17.5	13.5	12.5
8	8.5	6.0	12.0	8.5	17.5	14.0	16.5	15.0	22.5	18.5	12.5	11.5
9	9.0	6.5	11.5	10.5	15.5	13.5	15.0	14.0	22.5	18.5	13.0	12.0
10	10.5	8.0	10.5	9.5	13.5	11.5	16.0	13.5	21.0	18.0	12.5	11.5
11	10.0	8.5	9.5	9.0	15.0	11.0	16.5	12.5	20.5	18.0	12.5	11.0
12	9.0	6.5	9.5	8.5	14.0	13.0	17.5	13.0	18.5	16.5	12.0	10.0
13	8.0	6.5	10.0	9.0	13.5	12.0	18.5	14.5	16.5	15.5	12.0	11.0
14	8.5	7.0	10.0	9.5	13.0	12.0	20.0	15.5	17.5	14.5	13.0	11.5
15	8.0	7.0	9.5	8.0	13.0	11.0	17.5	15.0	16.0	15.0	13.0	12.0
16	7.5	6.5	10.0	8.0	14.5	11.0	16.0	14.5	15.0	14.0	12.0	10.5
17	7.5	6.0	11.0	7.5	15.5	11.5	17.5	14.0	14.5	13.0	11.0	10.0
18	9.0	7.0	12.0	8.0	14.5	12.5	18.0	14.0	15.5	13.0	10.0	9.5
19	9.0	8.0	13.0	10.0	16.0	12.0	18.5	14.0	15.5	14.5	10.5	9.0
20	8.0	7.0	14.5	11.0	16.0	13.5	19.5	15.0	15.0	14.5	11.0	9.5
21	7.5	6.5	13.5	10.0	14.5	13.0	20.0	15.0	14.5	14.0	12.0	11.0
22	7.0	6.5	10.5	8.5	16.0	12.5	20.0	16.0	14.5	13.5	12.0	10.5
23	8.5	6.5	10.5	8.5	14.0	12.5	21.5	17.0	13.5	12.5	12.0	10.5
24	9.5	7.5	9.5	8.5	13.5	12.0	21.5	16.5	14.0	13.5	13.0	11.5
25	9.5	9.0	10.5	8.5	13.0	12.0	21.5	17.0	14.0	12.5	13.5	12.5
26	9.0	8.0	10.0	9.0	15.5	11.5	20.0	17.5	14.0	12.0	13.5	12.5
27	9.0	8.0	10.5	9.5	17.5	13.0	20.0	16.0	15.0	13.0	14.0	13.0
28	9.5	8.5	11.0	10.0	16.0	14.5	19.5	15.0	16.0	13.5	13.5	12.0
29	10.0	8.0	12.0	9.0	15.5	14.5	20.0	15.0	17.0	15.0	12.5	11.5
30	9.0	8.0	12.0	8.5	16.5	14.0	20.0	15.5	16.5	15.5	13.0	12.0
31	---	---	13.5	9.5	---	---	20.0	15.0	16.0	15.0	---	---
MONTH	10.5	5.5	14.5	6.5	18.0	11.0	21.5	12.5	22.5	12.0	17.5	9.0

14150800 WINBERRY CREEK NEAR LOWELL, OR

LOCATION.--Lat 43°54'50", long 122°41'15", in NE¼SE¼ sec.16, T.19 S., R.1 E., Lane County, Hydrologic Unit 17090001, on right bank 0.9 mi (1.4 km) upstream from Nelson Creek, 4.6 mi (7.4 km) east of Lowell, and at mile 4.4 (7.1 km).

DRAINAGE AREA.--43.9 mi² (113.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 863.70 ft (263.256 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Water-discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--15 years, 121 ft³/s (3.427 m³/s), 37.43 in/yr (951 mm/yr), 87,660 acre-ft/yr (108 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s (127 m³/s) Dec. 22, 1964, gage height, 8.07 ft (2.460 m); minimum, 1.5 ft³/s (0.042 m³/s) Sept. 4, 5, 8-10, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.32 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	1930	*2,040	57.8	*5.49	1.673	Dec. 14	2200	1,460	41.3	4.69	1.430

Minimum, 7.7 ft³/s (0.22 m³/s) Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	128	292	179	101	59	35	204	66	21	11	25
2	35	187	351	150	139	56	43	177	57	39	11	23
3	28	130	729	141	575	53	48	143	50	53	10	21
4	23	94	450	128	347	56	50	120	46	57	9.9	24
5	19	99	329	124	248	55	60	104	41	49	9.9	44
6	24	148	281	118	195	56	70	92	37	41	9.5	53
7	47	145	409	110	174	51	64	80	34	35	9.1	73
8	40	122	355	106	179	55	55	70	31	31	8.7	68
9	31	97	264	103	159	63	50	63	31	28	8.0	67
10	26	77	207	116	134	57	46	66	55	27	7.7	190
11	22	64	212	112	118	61	42	94	51	24	7.7	239
12	19	53	230	122	106	68	40	116	40	22	9.5	143
13	18	64	445	128	92	82	38	108	40	21	22	108
14	16	245	908	126	84	94	38	114	41	19	15	106
15	15	401	1070	128	104	87	40	236	44	19	26	89
16	14	312	713	145	112	80	46	252	39	39	41	76
17	14	207	739	169	126	77	44	209	35	33	45	70
18	13	157	497	185	141	68	40	162	32	26	26	132
19	12	122	315	185	143	61	44	126	31	23	20	112
20	12	97	230	185	132	55	48	103	29	20	18	90
21	12	85	179	227	116	50	72	87	27	18	22	76
22	11	333	148	329	101	47	125	74	27	17	157	63
23	15	437	145	261	89	58	170	67	25	16	103	53
24	18	659	218	201	80	55	110	63	30	15	74	47
25	50	1200	215	162	74	48	124	67	30	14	94	42
26	71	991	177	148	77	45	659	62	26	14	64	38
27	48	501	152	128	71	42	510	79	24	14	50	35
28	36	326	134	116	64	40	326	106	22	13	41	31
29	33	471	152	112	---	38	236	106	23	13	34	29
30	122	401	258	99	---	40	195	90	21	12	30	27
31	157	---	230	95	---	36	---	77	---	12	28	---
TOTAL	1049	8353	11034	4638	4081	1793	3468	3517	1085	785	1022.0	2194
MEAN	33.8	278	356	150	146	57.8	116	113	36.2	25.3	33.0	73.1
MAX	157	1200	1070	329	575	94	659	252	66	57	157	239
MIN	11	53	134	95	64	36	35	62	21	12	7.7	21
CFSM	.77	6.33	8.11	3.42	3.33	1.32	2.64	2.57	.83	.58	.75	1.67
IN.	.89	7.08	9.35	3.93	3.46	1.52	2.94	2.98	.92	.67	.87	1.86
AC-FT	2080	16570	21890	9200	8090	3560	6880	6980	2150	1560	2030	4350

CAL YR 1977 TOTAL 41286.1 MEAN 113 MAX 1200 MIN 4.5 CFSM 2.57 IN 34.98 AC-FT 81890
WTR YR 1978 TOTAL 43019.0 MEAN 118 MAX 1200 MIN 7.7 CFSM 2.69 IN 36.45 AC-FT 85330

14150800 WINBERRY CREEK NEAR LOWELL, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: August 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: Maximum, 26.5°C July 3, 1967; minimum, 0.0°C on several days in 1965, Jan. 4, 30, Feb. 2, 3, Dec. 6-17, 1972, and Jan. 5-12, 1974.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum, 24.0°C July 25, Aug. 7-9; minimum, 4.0°C Feb. 11, 12, Mar. 1, 2.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1			---	---	9.0	8.5	5.0	4.5	6.5	6.0	5.5	4.0
2			---	---	9.5	9.0	5.5	5.0	7.0	6.5	6.5	4.0
3			---	---	9.5	7.0	7.0	5.5	8.5	7.0	8.0	6.0
4			---	---	9.0	8.0	7.0	6.0	8.5	7.5	8.0	7.0
5			---	---	8.0	7.0	7.0	6.5	9.0	8.0	8.0	7.0
6			---	---	9.0	7.5	7.0	6.5	8.5	7.5	9.5	7.5
7			---	---	8.0	6.5	7.0	6.0	8.0	7.5	9.0	8.0
8			---	---	6.5	5.5	8.0	7.0	7.0	6.5	9.0	8.5
9			---	---	7.0	5.5	8.0	7.5	7.0	6.0	9.5	8.0
10			---	---	8.0	7.0	8.0	7.0	5.5	5.0	8.5	7.5
11			---	---	8.5	8.0	7.0	5.5	5.0	4.0	7.5	7.0
12			---	---	8.0	7.5	7.5	6.5	5.0	4.0	7.5	6.0
13			---	---	10.0	8.5	8.0	7.5	6.0	4.5	7.5	6.5
14			---	---	10.0	9.0	8.5	7.5	6.0	5.0	7.5	6.0
15			---	---	9.5	7.0	8.0	7.5	6.0	4.5	7.5	5.0
16			---	---	7.5	7.0	8.0	7.5	5.5	4.5	8.5	6.0
17			---	---	7.5	7.0	8.0	7.5	6.5	5.5	10.0	7.0
18			---	---	7.0	6.5	7.5	7.0	8.0	6.5	10.5	7.5
19			---	---	6.0	5.5	8.0	7.0	7.5	6.5	11.0	7.5
20			---	---	6.0	5.0	8.5	8.0	8.0	6.5	11.5	7.5
21			---	---	7.0	6.0	8.5	7.0	8.5	7.5	11.5	8.5
22			---	---	7.5	6.5	7.0	6.5	8.0	7.0	11.5	9.5
23			---	---	7.5	6.5	6.5	6.0	8.5	7.0	10.5	9.0
24			---	---	8.0	7.0	6.0	5.0	9.0	8.0	10.0	8.5
25			10.0	9.0	7.0	6.0	6.5	5.5	8.5	7.5	11.5	8.5
26			9.5	9.0	6.5	5.5	7.0	6.5	8.0	7.0	11.5	9.0
27			9.0	8.5	6.5	5.0	7.0	5.5	7.0	6.0	12.5	8.5
28			8.5	8.0	7.5	6.5	7.5	6.0	6.0	4.5	11.5	8.5
29			10.0	8.5	7.5	6.5	7.5	7.0	---	---	12.0	10.0
30			9.5	8.5	7.0	6.0	7.0	5.5	---	---	12.0	10.5
31			---	---	6.5	5.0	7.0	6.0	---	---	12.0	10.0
MONTH			10.0	8.0	10.0	5.0	8.5	4.5	9.0	4.0	12.5	4.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.5	8.5	9.5	8.0	---	---	16.5	15.0	21.5	15.5	17.5	13.5
2	9.0	7.5	10.0	7.5	---	---	14.5	13.5	22.0	16.0	18.0	14.5
3	10.0	7.0	10.0	8.0	---	---	13.5	13.0	22.5	17.0	16.0	14.5
4	9.5	8.0	9.0	7.0	---	---	15.0	12.5	21.5	18.0	14.5	13.0
5	8.5	7.5	9.5	6.0	---	---	17.0	12.5	21.5	16.0	13.0	12.5
6	9.5	6.0	11.5	6.0	---	---	18.0	13.0	22.0	16.5	13.0	12.0
7	8.0	5.5	12.5	7.5	19.0	---	18.0	14.5	24.0	17.5	13.0	11.5
8	10.5	6.0	13.5	8.0	19.5	14.0	16.5	14.5	24.0	18.5	12.5	10.0
9	11.0	6.5	12.0	10.5	16.5	14.0	15.5	13.5	24.0	19.0	12.5	11.5
10	13.0	7.5	10.5	9.5	13.5	12.0	18.0	13.5	22.0	17.5	12.0	11.0
11	12.0	8.5	10.0	9.0	16.5	11.0	18.5	12.5	22.0	18.5	12.0	11.0
12	11.0	7.0	10.5	8.0	14.5	13.0	19.5	13.0	19.5	16.5	12.0	9.5
13	9.0	7.0	---	---	14.5	12.0	21.0	14.5	17.5	15.0	11.5	11.0
14	9.5	7.5	---	---	13.5	12.0	22.5	16.5	19.0	14.0	12.5	11.0
15	8.5	7.5	---	---	15.0	11.0	19.5	16.5	17.0	15.0	13.0	11.0
16	7.5	7.0	---	---	16.5	11.5	17.0	15.5	15.5	14.0	11.0	9.5
17	8.5	6.5	---	---	18.0	11.5	19.5	14.5	15.0	13.0	10.5	9.5
18	10.5	7.5	---	---	15.5	13.5	19.5	14.0	17.0	12.0	10.0	9.0
19	10.0	8.0	---	---	18.5	12.5	20.5	14.5	16.0	13.5	10.5	8.5
20	9.0	7.0	---	---	18.0	13.5	21.5	15.5	15.5	14.5	11.5	8.5
21	8.5	7.0	---	---	16.0	14.0	22.5	16.0	15.0	14.0	11.5	10.0
22	7.5	7.0	---	---	18.0	13.0	22.5	17.0	14.0	12.5	12.0	10.0
23	9.5	7.0	---	---	15.5	13.0	24.0	18.0	13.0	11.5	12.5	10.0
24	10.5	8.0	---	---	15.0	12.5	23.5	18.0	13.5	12.5	13.5	11.0
25	10.0	9.0	---	---	14.0	12.5	24.0	18.0	13.5	11.5	13.5	11.5
26	9.5	8.5	---	---	18.5	11.5	21.5	19.0	14.5	11.0	14.0	11.5
27	9.5	8.5	---	---	20.0	13.0	21.0	16.5	15.0	11.5	14.5	13.0
28	10.0	8.5	---	---	18.0	15.0	21.0	16.0	16.5	12.5	13.5	11.0
29	11.0	8.0	---	---	16.5	15.0	22.0	16.0	17.5	13.5	13.0	10.0
30	9.0	8.5	---	---	18.5	14.5	22.5	17.0	15.5	14.5	13.5	11.5
31	---	---	---	---	---	---	22.0	16.5	16.0	14.0	---	---
MONTH	13.0	5.5	13.5	6.0	20.0	11.0	24.0	12.5	24.0	11.0	18.0	8.5

14150900 FALL CREEK LAKE NEAR LOWELL, OR

LOCATION.--Lat 43°56'40", long 122°45'20", in SW¼ sec.1, T.19 S., R.1 W., Lane County, Hydrologic Unit 17090001, in regulating tower near the center of Fall Creek Dam on Fall Creek, 2.2 mi (3.5 km) northeast of Lowell, and at mile 7.2 (11.6 km).

DRAINAGE AREA.--184 mi² (477 km²).

PERIOD OF RECORD.--January 1966 to current year. Prior to October 1971, published as Fall Creek Reservoir near Lowell.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with concrete gate and spillway section, completed in 1965 by Corps of Engineers; storage began January 1966. Total capacity is 125,100 acre-ft (154 hm³) at elevation 834 ft (254.2 m) and usable capacity is 115,500 acre-ft (142 hm³) between elevation 728 ft (221.9 m) and 834 ft (254.2 m). Reservoir used for flood control, conservation, and recreation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 123,200 acre-ft (152 hm³) May 30, 31, 1972; maximum elevation, 832.98 ft (253.892 m) May 31, 1972; minimum, no contents Nov. 7 to Dec. 6, 1969, Nov. 14-16, 1970, Nov. 18-25, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 114,200 acre-ft (141 hm³) July 25, .evation, 827.95 ft (252.359 m); minimum, 108 acre-ft (133,000 m³) Dec. 12, elevation, 680.35 ft (207.371 m).

CORRECTIONS.--Change in contents, in acre-feet, published in WRD Oreg. 1972, are in error and should not be used.

Capacity table (elevation, in feet, and total contents, in acre-feet)

670.4	0	725	8,340	785	53,120
679	59	735	13,270	795	64,590
685	366	745	19,480	805	77,880
695	1,400	755	26,130	815	97,750
705	2,850	765	33,770	825	109,200
715	5,200	775	42,580	833	123,200

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	798.95	743.90	751.83	727.66	732.88	774.41	788.60	809.66	823.26	826.15	827.20	825.94
2	796.85	743.55	749.84	727.73	736.00	774.92	788.97	810.42	823.48	826.32	827.08	825.77
3	794.99	742.28	758.57	727.94	744.72	775.43	789.37	811.00	823.68	826.46	826.97	825.46
4	793.17	739.80	757.00	727.99	746.10	776.02	789.74	811.54	823.86	826.66	826.82	825.19
5	791.31	735.48	751.63	728.28	746.16	776.58	790.28	811.98	823.94	826.80	826.70	824.74
6	789.49	732.13	745.44	727.95	746.06	777.05	790.79	812.38	823.96	826.90	826.58	824.29
7	787.83	728.09	741.58	727.83	746.76	777.53	791.27	812.72	823.95	826.98	826.46	823.60
8	786.05	723.37	734.92	727.69	749.05	778.04	791.69	812.96	824.00	827.07	826.31	822.74
9	784.11	720.40	725.47	727.87	751.32	778.62	792.06	813.12	824.13	827.14	826.19	821.95
10	782.05	719.12	710.73	728.02	753.15	779.16	792.38	813.28	824.42	827.21	826.03	821.86
11	779.83	714.61	681.53	728.10	754.73	779.69	792.68	813.70	824.66	827.26	825.88	821.66
12	777.36	708.91	695.51	728.23	756.02	780.34	792.95	814.22	824.78	827.32	825.80	820.66
13	775.01	702.91	718.79	728.31	757.28	781.02	793.19	814.72	824.82	827.36	825.76	819.39
14	772.66	691.84	740.91	728.38	758.42	781.72	793.47	815.34	824.90	827.44	825.66	818.19
15	770.01	690.90	759.42	728.44	759.85	782.28	793.74	816.39	825.08	827.48	825.65	816.88
16	767.42	703.40	768.90	728.68	761.30	782.78	794.04	817.46	825.28	827.58	825.67	815.43
17	764.61	706.80	777.12	729.00	762.81	783.27	794.33	818.26	825.42	827.67	825.73	814.00
18	762.05	706.20	780.91	728.33	764.35	783.75	794.61	818.92	825.58	827.73	825.66	812.86
19	760.05	705.90	780.23	727.62	765.85	784.18	794.88	819.46	825.64	827.77	825.58	811.88
20	758.65	705.80	778.44	727.72	767.20	784.56	795.19	819.90	825.64	827.82	825.52	810.90
21	757.21	704.40	776.28	728.22	768.32	784.91	795.66	820.28	825.63	827.85	825.51	809.86
22	755.71	706.50	772.84	729.18	769.30	785.27	796.50	820.52	825.65	827.87	825.73	808.79
23	754.30	704.25	768.04	728.27	770.22	785.78	797.65	820.70	825.75	827.90	825.83	807.67
24	752.86	715.10	764.63	728.06	771.00	786.21	798.52	820.86	825.87	827.91	825.93	806.49
25	751.86	743.40	760.70	727.94	771.72	786.55	799.38	821.14	826.00	827.94	826.18	805.30
26	751.32	759.46	755.58	728.05	772.54	786.87	802.74	821.44	826.05	827.89	826.26	804.03
27	750.01	762.36	749.55	727.90	773.25	787.18	805.23	821.80	826.02	827.78	826.25	802.76
28	748.00	760.16	742.65	727.94	773.84	787.48	806.77	822.32	825.96	827.68	826.22	801.42
29	746.07	759.47	737.28	727.92	---	787.78	807.88	822.68	825.98	827.57	826.17	800.07
30	745.56	757.50	734.33	728.80	---	788.09	808.82	822.92	826.06	827.44	826.10	798.58
31	745.22	---	730.89	730.75	---	788.35	---	823.08	---	827.33	826.03	---
MEAN	769.37	724.60	748.44	728.22	758.22	782.12	795.45	816.94	824.98	827.36	826.11	814.95
MAX	798.95	762.36	780.91	730.75	773.84	788.35	808.82	823.08	826.06	827.94	827.20	825.94
MIN	745.22	690.90	681.53	727.62	732.88	774.41	788.60	809.66	823.26	826.15	825.51	798.58
(†)	19,630	27,940	11,040	10,970	41,470	56,840	83,380	105,900	111,000	113,200	110,900	69,130
(‡)	-52,470	+8,310	-16,900	-70	+30,500	+15,370	+26,540	+22,520	+5,100	+2,200	-2,300	-41,770

CAL YR 1977 MEAN 779.54 MAX 832.02 MIN 678.84 AC-FT‡ +7,420
WTR YR 1978 MEAN 784.89 MAX 827.94 MIN 681.53 AC-FT‡ -2,970

† Contents, in acre-feet, at 2400, on last day of month.
‡ Change in contents, in acre-feet.

14151000 FALL CREEK BELOW WINBERRY CREEK, NEAR FALL CREEK, OR

LOCATION.--Lat 43°56'40", long 122°46'25", in NW¼SE¼ sec.2, T.19 S., R.1 W., Lane County, Hydrologic Unit 17090001, on left bank 10 ft (3 m) upstream from highway bridge, 1.1 mi (1.8 km) downstream from Fall Creek Dam, 2.3 mi (3.7 km) southeast of town of Fall Creek, and at mile 6.1 (9.8 km).

DRAINAGE AREA.--186 mi² (482 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October to December 1911 (published as Big Fall Creek near Fall Creek; gage heights and discharge measurements only), September 1935 to current year.

REVISED RECORDS.--WSP 1094: 1946(M). WSP 1248: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 637.81 ft (194.404 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Oct. 1 to Dec. 31, 1911, nonrecording gage at site 0.25 mi (0.40 km) downstream at different datum. Sept. 9, 1935, to Aug. 3, 1950, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good. Flow regulated since 1966 by Fall Creek Lake (see station 14150900). No diversion above station.

AVERAGE DISCHARGE.--43 years, 586 ft³/s (16.60 m³/s), 42.78 in/yr (1,087 mm/yr), 424,600 acre-ft/yr (524 hm³/yr), adjusted for storage since January 1965.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,700 ft³/s (700 m³/s) Dec. 11, 1956, gage height, 18.80 ft (5.370 m), from rating curve extended above 9,700 ft³/s (275 m³/s); minimum, 1.5 ft³/s (0.042 m³/s) Oct. 7, 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,920 ft³/s (111 m³/s) Dec. 10, gage height, 7.48 ft (2.280 m); minimum, 17 ft³/s (0.48 m³/s) Nov. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1400	996	3460	1660	45	42	41	48	103	53	146	143
2	1390	990	2680	736	51	42	41	46	48	55	146	211
3	1270	985	911	684	633	42	40	46	46	52	146	317
4	1190	1160	2740	684	1350	42	41	46	48	52	148	407
5	1180	1580	3410	704	1180	42	41	46	95	52	148	496
6	1200	1540	3410	883	973	42	41	46	150	51	148	599
7	1200	1520	3560	756	663	42	41	46	150	46	146	798
8	1190	1560	3730	684	313	44	41	99	107	44	146	916
9	1180	967	3580	566	165	44	41	143	46	45	146	911
10	1200	562	3660	585	125	44	41	148	48	45	146	911
11	1200	979	3060	562	93	44	41	99	48	45	146	1100
12	1180	1010	710	580	93	44	41	46	92	45	146	1290
13	1200	979	181	594	61	44	41	46	153	45	146	1290
14	1190	1720	63	594	38	71	41	52	153	45	148	1290
15	1180	1960	75	594	42	86	41	107	101	45	148	1290
16	1160	756	56	628	41	88	41	155	48	46	148	1350
17	1190	580	52	819	41	69	41	153	48	45	148	1340
18	1070	746	746	1160	41	44	41	88	48	45	146	1200
19	808	517	2030	1130	41	44	41	50	99	46	146	1010
20	585	422	2010	933	41	44	41	51	153	46	146	962
21	580	418	2000	1100	41	42	42	51	153	46	146	956
22	575	1150	2380	1490	41	39	45	113	117	46	146	956
23	571	2320	2930	1480	42	42	45	150	48	46	146	950
24	585	2430	2960	1010	42	41	46	150	48	46	146	945
25	585	411	2950	813	42	41	46	107	48	46	146	950
26	585	129	2940	668	42	41	55	48	93	84	146	950
27	689	1490	2930	618	42	36	49	48	153	146	146	956
28	798	2610	2920	535	42	23	49	48	153	146	146	956
29	787	2580	2350	509	---	23	48	90	97	146	143	950
30	782	2650	1970	264	---	23	48	150	53	146	143	979
31	889	---	1940	44	---	30	---	150	---	146	143	---
TOTAL	30589	37717	68394	24067	6364	1385	1292	2666	2747	1992	4531	27379
MEAN	987	1257	2206	776	227	44.7	43.1	86.0	91.6	64.3	146	913
MAX	1400	2650	3730	1660	1350	88	55	155	153	146	148	1350
MIN	571	129	52	44	38	23	40	46	46	44	143	143
AC-FT	60670	74810	135700	47740	12620	2750	2560	5290	5450	3950	8990	54310
MEAN†	133	1,397	1,930	775	776	295	489	452	177	100	109	180
CFSM†	.72	7.51	10.38	4.17	4.17	1.59	2.63	2.43	.95	.54	.59	.97
IN.†	.83	8.38	11.98	4.81	4.35	1.83	2.93	2.80	1.06	.62	.67	1.08
AC-FT†	8,200	83,120	118,800	47,670	43,120	18,120	29,100	27,810	10,550	6,150	6,690	10,710

CAL YR 1977 TOTAL 188,958.5 MEAN 518 MAX 3,730 MIN 8.4 AC-FT 374,800 MEAN† 528 CFSM† 2.84 IN.† 38.54 AC-FT† 382,200
WTR YR 1978 TOTAL 209,123.0 MEAN 573 MAX 3,730 MIN 23 AC-FT 414,800 MEAN† 566 CFSM† 3.04 IN.† 41.34 AC-FT† 410,000

† Adjusted for change in contents in Fall Creek Lake.

14151000 FALL CREEK BELOW WINBERRY CREEK, NEAR FALL CREEK, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1950 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 26.0°C July 28, 1958; minimum, 0.5°C on several days in 1962 and 1965.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 18.0°C June 2, 11, 17, 26; minimum, 4.5°C Nov. 22.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.5	11.0	12.5	12.0	9.5	9.0	8.5	6.5	7.5	7.0	8.0	6.5
2	12.0	11.5	12.0	12.0	10.5	9.0	6.5	6.0	7.5	7.0	8.0	7.0
3	12.5	12.0	12.0	11.0	10.5	9.0	6.5	6.0	8.5	7.5	7.5	7.0
4	13.0	12.5	11.5	11.0	9.5	9.0	6.5	6.5	8.0	7.5	7.5	7.0
5	13.5	13.0	11.0	11.0	9.0	9.0	6.5	6.5	8.5	8.0	8.5	7.0
6	14.0	13.5	11.0	11.0	9.0	8.5	7.0	6.0	8.0	8.0	8.5	7.5
7	14.5	14.0	11.0	10.5	9.0	8.5	7.5	7.0	9.0	8.0	8.0	7.5
8	15.0	14.5	11.0	10.5	8.5	8.0	7.5	7.0	8.5	8.0	8.0	7.5
9	15.0	14.5	10.5	9.5	8.0	7.5	8.0	6.0	8.0	7.5	9.0	7.5
10	15.0	15.0	10.0	9.0	7.5	7.5	7.0	7.0	8.5	7.5	8.0	7.0
11	15.5	15.0	9.5	9.0	8.5	7.5	7.5	7.0	8.0	7.0	8.0	7.0
12	15.5	15.0	9.5	9.5	8.5	8.0	7.5	7.5	7.5	7.5	8.5	7.0
13	15.5	15.0	9.5	9.0	10.5	8.5	7.5	7.5	8.5	7.0	8.5	7.0
14	15.5	15.0	9.5	8.5	11.5	10.5	7.5	7.5	8.0	7.0	8.5	7.0
15	16.0	15.5	10.0	9.0	11.0	10.0	8.0	7.5	8.0	6.5	8.0	7.0
16	16.0	15.5	10.0	9.0	10.0	9.0	8.0	7.5	7.5	7.0	8.5	7.0
17	16.0	15.5	9.0	8.5	9.5	9.0	8.0	8.0	8.0	7.5	9.0	7.0
18	16.0	15.5	8.5	7.5	9.0	7.5	8.0	8.0	8.5	6.5	9.5	7.5
19	15.5	15.5	8.0	6.5	8.0	8.0	8.5	8.0	8.5	6.5	9.5	7.5
20	15.5	15.5	6.5	5.0	8.0	7.5	8.0	7.5	8.5	6.5	9.5	7.5
21	15.5	15.0	5.5	5.0	8.0	7.0	8.5	7.5	8.0	7.0	11.0	7.5
22	15.0	15.0	5.5	4.5	7.0	6.5	8.0	8.0	8.5	7.0	12.0	9.5
23	15.0	15.0	7.0	5.5	7.5	7.0	8.0	7.5	8.0	7.0	10.5	9.0
24	15.0	14.5	8.5	7.0	7.5	7.5	7.5	7.0	8.0	6.5	11.0	9.5
25	15.0	14.5	11.0	8.5	7.5	7.0	7.0	7.0	8.0	7.0	12.5	10.0
26	14.5	14.0	10.5	9.5	7.5	7.0	7.5	6.5	8.0	6.5	11.5	9.5
27	14.0	14.0	9.5	9.5	7.0	7.0	7.0	6.5	8.0	6.5	12.5	8.5
28	14.0	13.5	9.5	9.5	7.0	7.0	7.5	7.0	8.0	6.0	9.5	7.5
29	14.0	13.5	9.5	9.0	8.0	7.0	7.0	7.0	---	---	9.5	8.0
30	13.5	13.0	9.5	9.0	7.5	7.0	9.0	7.0	---	---	9.5	8.0
31	13.0	12.5	---	---	7.5	7.0	7.5	7.0	---	---	10.0	7.0
MONTH	16.0	11.0	12.5	4.5	11.5	6.5	9.0	6.0	9.0	6.0	12.5	6.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.5	9.5	11.5	10.0	17.0	13.5	10.0	9.0	9.5	8.5	---	---
2	11.0	10.0	11.5	10.0	18.0	13.0	11.0	9.0	9.5	8.0	15.0	13.5
3	12.5	10.5	12.0	10.0	17.0	13.5	10.0	9.0	9.5	8.5	14.0	12.0
4	12.0	9.5	11.5	10.0	17.5	13.5	11.0	9.0	9.5	8.5	12.5	11.5
5	11.5	9.5	12.0	10.0	17.0	14.0	12.0	9.0	9.5	8.5	12.0	11.0
6	12.0	10.0	12.5	10.0	15.5	13.5	12.0	9.0	9.5	8.5	11.5	10.5
7	12.5	10.0	12.5	10.0	15.5	13.5	11.5	9.0	9.5	8.5	10.5	10.0
8	12.5	9.5	11.5	10.0	16.5	14.0	10.5	9.0	9.5	8.0	10.5	10.5
9	13.0	10.0	11.0	10.0	16.5	13.5	10.5	9.0	9.5	8.0	10.5	10.5
10	13.5	9.5	10.5	10.0	16.0	14.5	11.5	9.0	9.5	8.5	10.5	9.5
11	13.0	9.5	11.0	10.0	18.0	14.0	12.0	8.5	9.5	8.5	10.0	10.0
12	13.0	9.5	11.5	10.0	16.0	14.0	12.0	8.5	9.0	8.5	10.5	10.0
13	12.0	9.5	11.0	10.5	16.0	13.5	12.5	9.0	9.5	8.5	10.5	10.0
14	11.0	9.5	11.5	10.0	15.5	14.0	12.0	9.0	---	8.5	10.5	9.5
15	10.5	10.0	12.5	10.5	17.0	14.0	10.0	9.0	---	---	10.0	9.5
16	12.0	9.5	12.5	12.0	17.5	14.0	11.0	9.0	---	---	10.0	10.0
17	12.0	10.0	13.0	11.5	18.0	14.0	12.0	9.0	---	---	10.0	9.5
18	12.0	9.5	14.0	11.0	15.5	14.5	12.5	8.5	---	---	10.0	10.0
19	12.0	9.5	12.5	10.0	17.0	14.0	12.0	8.5	---	---	10.5	10.0
20	12.0	9.5	13.5	10.0	15.5	15.0	12.0	8.5	---	---	10.5	10.0
21	11.0	9.5	10.5	10.0	15.0	15.0	12.0	8.5	---	---	10.5	10.0
22	11.0	10.0	14.5	9.5	16.0	14.5	12.0	8.5	---	---	11.0	10.5
23	12.5	10.0	14.5	12.0	16.0	14.5	12.0	8.5	---	---	11.0	10.5
24	11.5	9.5	14.5	12.5	17.5	14.5	12.0	8.5	---	---	11.5	11.0
25	10.5	10.0	15.0	13.0	16.5	14.5	12.0	8.5	---	---	11.5	11.0
26	11.0	10.0	14.5	13.0	18.0	14.5	11.0	8.5	---	---	12.0	11.5
27	11.5	10.0	15.0	13.0	16.5	15.0	9.5	8.0	---	---	12.5	12.0
28	11.5	10.5	14.0	13.0	16.5	15.0	9.5	8.0	---	---	13.0	12.5
29	12.5	10.0	16.0	12.5	16.0	9.5	9.5	8.0	---	---	13.0	12.5
30	11.0	10.0	14.5	12.5	11.5	9.0	9.5	8.0	---	---	13.5	13.0
31	---	---	15.5	13.5	---	---	9.5	8.0	---	---	---	---
MONTH	13.5	9.5	16.0	9.5	18.0	9.0	12.5	8.0	9.5	8.0	15.0	9.5

14152000 MIDDLE FORK WILLAMETTE RIVER AT JASPER, OR

LOCATION.--Lat 43°59'55", long 122°54'20", in SW¼SW¼ sec. 14, T.18 S., R.2 W., Lane County, Hydrologic Unit 17090001, on right bank 25 ft (8 m) downstream from highway bridge at Jasper, 0.1 mi (0.2 km) downstream from Hills Creek, and at mile 195.0 (313.8 km).

DRAINAGE AREA.--1,340 mi^2 (3,471 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1905 to February 1912, July 1913 to March 1917, October 1952 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1288: 1907-8, 1910-12, 1914-16, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 513.45 ft (156.500 m) National Geodetic Vertical Datum of 1929. September 1905 to February 1912 and July 1913 to March 1917, nonrecording gage at approximately same site at datum about 1.5 ft (0.46 m) higher. Oct. 22, 1952, to Sept. 30, 1953, nonrecording gage at site 25 ft (8 m) upstream at same datum.

REMARKS.--Water-discharge records good. Flow regulated since 1953 by Lookout Point Lake (see station 14149000), since 1961 by Hills Creek Lake (see station 14145100), and since 1966 by Fall Creek Lake (see station 14150900).

AVERAGE DISCHARGE.--35 years (water years 1906-11, 1914-16, 1953-78), 4,113 ft^3/s (116.5 m^3/s), 2,980,000 acre-ft/yr (3.67 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 94,000 ft^3/s (2,660 m^3/s) Nov. 23, 1909, gage height, 17.4 ft (5.20 m), datum then in use, from graph based on gage readings, from rating curve extended above 42,000 ft^3/s (1,190 m^3/s); minimum, 366 ft^3/s (10.4 m^3/s) Dec. 5, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,100 ft^3/s (569 m^3/s) Dec. 24, gage height, 9.43 ft (2.874 m); minimum, 1,020 ft^3/s (28.9 m^3/s) July 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2830	4540	17000	11500	2040	1510	1440	1480	1260	1140	1770	2900
2	2660	4700	15300	10000	2250	1550	1510	1420	1170	1200	1840	2560
3	2560	4750	7720	9830	5100	1590	1560	1370	1160	1200	1860	2620
4	2770	5130	16600	9770	4870	1610	1540	1350	1140	1200	1900	2740
5	3540	5340	17000	9980	4400	1600	1600	1350	1160	1190	1980	2870
6	4360	3870	17400	10300	3820	1590	1610	1310	1240	1160	1980	3160
7	4360	3430	17100	9500	4200	1550	1570	1290	1240	1130	2070	3470
8	4320	2790	17500	8970	4010	1550	1530	1300	1200	1120	2070	3590
9	4300	2390	17200	8880	4160	1540	1510	1360	1120	1120	2050	3610
10	4360	1900	17200	7050	4010	1510	1490	1360	1350	1120	2730	3970
11	4480	2570	16800	5870	3260	1530	1460	1380	1390	1150	2870	4440
12	4480	3520	14100	5670	3140	1570	1450	1300	1380	1100	2870	5020
13	4500	4340	8370	5690	3010	1630	1440	1300	1460	1070	2840	4980
14	4240	6020	4600	5710	1880	1650	1450	1410	1450	1060	2730	5000
15	4340	7800	5980	5820	1890	1650	1450	1730	1470	1090	2570	4980
16	3690	7240	5690	5910	1830	1570	1470	1750	1390	1150	2430	4750
17	3870	6740	4480	6090	1790	1520	1480	1640	1380	1170	2390	4600
18	4180	6860	10800	6310	1760	1480	1460	1520	1370	1160	2350	4520
19	3990	6630	16000	6240	1710	1450	1330	1380	1450	1150	2320	4460
20	3420	6180	15600	5940	1670	1450	1280	1330	1530	1140	2340	4680
21	2870	6200	16300	6180	1630	1440	1320	1310	1540	1120	2360	4790
22	2590	8350	18000	6980	1730	1440	1510	1330	1520	1080	2390	4770
23	2350	13100	18900	6700	1790	1680	1700	1370	1440	1090	2360	4520
24	2600	12900	19700	6090	1780	1650	1530	1360	1440	1150	2350	4480
25	3010	7080	19600	5760	1690	1600	1510	1330	1440	1300	2410	4500
26	3190	4870	19200	5540	1700	1530	2160	1250	1460	1420	2360	4600
27	3210	7610	19000	5380	1670	1470	1960	1280	1520	1640	2340	4640
28	3470	13700	17500	3990	1630	1450	1730	1290	1520	1770	2320	4660
29	3570	14400	15600	3420	---	1440	1600	1290	1510	1770	2320	4640
30	3590	15700	15500	3060	---	1430	1510	1340	1350	1770	2320	4050
31	3690	---	11900	2340	---	1430	---	1310	---	1770	2690	---
TOTAL	111390	200650	453640	210470	74420	47660	46160	42790	41050	38700	72180	124570
MEAN	3593	6688	14630	6789	2658	1537	1539	1380	1368	1248	2328	4152
MAX	4500	15700	19700	11500	5100	1680	2160	1750	1540	1770	2870	5020
MIN	2350	1900	4480	2340	1630	1430	1280	1250	1120	1060	1770	2560
AC-FT	220900	398000	899800	417500	147600	94530	91560	84870	81420	76760	143200	247100

CAL YR 1977 TOTAL 1167095 MEAN 3198 MAX 19700 MIN 536 AC-FT 2315000
WTR YR 1978 TOTAL 1463680 MEAN 4010 MAX 19700 MIN 1060 AC-FT 2903000

14152000 MIDDLE FORK WILLAMETTE RIVER AT JASPER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1953 to December 1962, October 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 21.0°C June 1, 2, 1978; minimum, 1.5°C Jan. 25-27, 1969.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 21.0°C June 1, 2; minimum, 6.0°C Jan. 1-3, Feb. 11, 16.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	10.5	13.0	12.0	9.5	9.0	6.5	6.0	8.0	7.0	8.0	6.5
2	12.5	11.0	13.0	11.5	9.5	9.0	6.0	6.0	8.0	7.5	9.0	6.5
3	13.5	11.0	12.0	11.0	10.0	9.5	6.5	6.0	9.0	8.0	10.0	7.5
4	14.0	11.5	11.5	11.0	9.5	9.0	6.5	6.5	8.5	8.0	8.5	7.5
5	15.0	12.5	11.5	10.5	9.0	8.0	7.0	6.5	9.0	8.5	9.0	7.5
6	14.0	13.5	11.5	10.5	8.5	8.0	7.0	7.0	8.5	8.0	10.5	8.0
7	14.5	13.5	11.0	9.5	8.5	7.5	7.0	6.5	8.5	8.0	10.0	9.0
8	15.0	13.5	10.5	9.5	8.0	7.0	7.5	7.0	8.0	7.5	10.0	8.5
9	15.0	13.5	10.5	9.0	7.5	7.0	7.0	7.0	8.0	7.0	11.0	8.5
10	15.0	13.5	11.0	9.0	7.5	7.5	7.5	7.0	7.5	6.5	9.5	8.0
11	15.5	14.0	10.0	9.0	8.0	7.5	7.0	6.5	8.0	6.0	9.0	8.0
12	15.5	14.0	11.0	9.5	8.0	7.5	7.5	6.5	7.0	6.5	10.5	8.0
13	15.5	14.5	11.0	10.0	9.5	7.5	7.5	7.0	8.0	6.5	10.5	8.5
14	15.5	14.5	10.5	9.0	9.5	9.5	7.5	7.0	7.5	6.5	11.0	8.0
15	15.5	14.5	10.5	9.5	9.5	7.5	7.5	7.0	7.5	6.5	10.5	7.5
16	15.5	14.5	10.5	10.0	8.0	7.5	8.0	7.5	7.0	6.0	11.5	7.5
17	15.5	14.5	10.5	9.5	8.0	7.5	8.0	7.5	8.0	7.0	12.5	---
18	15.0	14.5	10.0	9.5	7.5	7.0	8.0	7.5	9.0	7.5	13.5	9.0
19	15.5	14.0	9.5	9.0	7.5	7.0	8.0	7.5	9.5	7.0	14.0	9.0
20	14.5	14.0	9.5	8.5	7.5	6.5	8.5	7.5	9.5	7.5	14.0	9.5
21	15.5	14.0	9.0	8.5	7.5	7.0	8.5	8.0	9.0	8.0	13.0	10.0
22	15.0	13.5	8.5	7.5	7.5	7.0	8.0	7.5	9.5	8.0	13.5	10.0
23	15.0	14.0	8.0	7.5	7.0	7.0	7.5	7.0	9.5	8.0	12.5	11.0
24	15.5	14.0	9.0	8.0	7.5	7.0	7.5	7.0	9.5	8.5	11.5	10.5
25	14.5	13.5	10.5	9.0	7.0	6.5	7.5	6.5	9.5	7.5	13.5	10.0
26	14.5	13.0	10.0	9.0	7.0	7.0	7.5	7.0	9.5	8.0	13.0	10.5
27	14.0	13.0	10.0	9.0	7.0	6.5	7.5	7.0	10.0	7.0	14.0	10.0
28	13.5	13.0	9.5	9.0	7.0	6.5	8.0	7.0	9.5	7.0	12.5	10.5
29	13.5	[illegible]	10.0	9.0	7.0	7.0	8.0	7.5	---	---	12.5	10.5
30	13.0	12.0	9.5	9.0	7.0	6.5	8.0	7.0	---	---	12.5	11.0
31	12.5	12.0	---	---	7.0	6.5	8.0	7.0	---	---	12.5	10.0
MONTH	15.5	10.5	13.0	7.5	10.0	6.5	8.5	6.0	10.0	6.0	14.0	6.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.5	10.0	13.5	10.5	21.0	14.0	15.5	12.5	18.0	13.0	18.5	15.5
2	12.0	10.0	14.0	10.5	21.0	15.0	18.0	12.5	18.0	13.0	18.5	16.0
3	12.5	9.5	14.5	10.5	20.5	14.5	18.5	13.0	18.0	13.5	---	---
4	12.0	10.0	13.5	10.0	20.0	14.0	18.0	13.5	17.5	14.0	---	---
5	12.0	9.5	14.5	9.5	20.0	14.0	16.0	12.5	18.0	13.5	14.5	---
6	12.5	9.0	16.0	10.0	---	14.0	15.0	12.0	18.0	13.5	15.0	13.5
7	13.0	9.0	16.5	11.0	---	---	18.0	12.0	18.5	14.0	14.5	12.5
8	13.5	9.5	17.0	11.0	---	---	18.0	12.5	18.5	14.0	13.5	12.5
9	14.5	9.5	14.5	12.0	19.5	13.5	19.0	13.0	18.5	14.0	13.5	12.5
10	15.5	10.5	13.5	11.5	19.0	14.5	19.5	13.5	17.5	14.0	14.0	12.5
11	15.0	10.5	14.5	11.5	16.0	13.5	19.5	14.0	17.5	15.0	14.0	12.0
12	14.5	10.0	13.5	11.5	18.0	13.5	14.5	13.0	15.5	15.0	14.0	12.0
13	13.0	10.0	13.5	12.0	18.5	13.5	16.0	12.5	16.0	14.5	13.0	12.5
14	13.0	10.5	13.0	11.0	19.0	14.0	18.5	12.5	18.0	14.0	14.0	12.5
15	12.0	10.5	13.5	10.5	15.5	13.5	18.5	13.0	17.0	15.0	14.5	12.5
16	12.5	10.0	14.5	11.0	18.5	13.5	18.5	13.5	16.5	15.0	14.0	12.5
17	12.0	9.5	15.5	10.5	17.5	13.5	---	---	17.0	14.5	13.0	12.0
18	14.0	10.5	17.0	11.0	15.5	13.5	---	---	18.0	14.5	13.5	12.0
19	12.5	10.5	17.5	11.5	17.5	13.5	---	---	17.0	15.0	14.5	12.0
20	12.5	10.0	19.0	13.0	15.0	13.5	---	---	16.5	15.5	14.5	12.5
21	12.5	10.0	15.0	12.5	16.0	13.0	19.5	13.5	16.0	15.0	15.0	13.5
22	10.5	9.5	16.0	11.5	15.5	13.0	19.0	13.5	16.5	15.0	15.0	13.0
23	11.5	9.0	15.5	11.5	18.0	13.5	20.0	14.0	16.5	14.5	15.5	13.5
24	12.5	10.0	14.0	12.5	19.0	14.0	19.5	13.5	16.0	15.0	15.5	13.5
25	12.0	11.0	14.0	12.5	17.5	14.0	19.5	13.5	16.5	14.5	15.0	14.0
26	11.5	10.5	15.0	11.5	15.5	13.5	17.5	14.0	17.5	14.0	15.5	14.0
27	12.0	10.0	17.0	11.5	16.5	13.0	17.5	13.5	18.0	14.5	15.5	14.0
28	13.5	10.5	17.5	12.0	14.0	13.0	17.5	13.0	18.5	15.0	16.0	14.0
29	14.5	10.0	19.0	13.0	15.0	12.5	18.0	13.0	18.5	15.5	16.0	14.0
30	12.0	11.0	20.0	13.5	14.0	12.5	18.0	13.0	16.5	15.5	15.5	14.5
31	---	---	19.5	14.0	---	---	18.0	13.0	17.0	15.5	---	---
MONTH	15.5	9.0	20.0	9.5	21.0	12.5	20.0	12.0	18.5	13.0	18.5	12.0

14152500 COAST FORK WILLAMETTE RIVER AT LONDON, OR

LOCATION.--Lat 43°38'30", long 123°05'05", in SW¼ sec.20, T.22 S., R.3 W., Lane County, Hydrologic Unit 17090002, on left bank 0.6 mi (1.0 km) north of London, 11.0 mi (17.7 km) south of Cottage Grove, and at mile 35.9 (57.8 km).

DRAINAGE AREA.--72.1 mi^2 (186.7 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1935 to current year.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 852.58 ft (259.866 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Sept. 18 to Oct. 17, 1935, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--43 years, 203 ft^3/s (5.749 m^3/s), 38.23 in/yr (971 mm/yr), 147,100 acre-ft/yr (181 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,500 ft^3/s (354 m^3/s) Dec. 22, 1964, gage height, 13.37 ft (4.075 m), from rating curve extended above 3,200 ft^3/s (90.6 m^3/s), on basis of slope-area measurement of peak flow; minimum, 6.8 ft^3/s (0.19 m^3/s) Aug. 18, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,100 ft^3/s (59.5 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2100	*2,600	73.6	*6.47	1.972	Dec. 14	2300	2,550	72.2	6.40	1.951

Minimum, 14 ft^3/s (0.40 m^3/s) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	150	285	327	231	120	82	180	84	38	18	22
2	42	211	289	289	802	109	116	159	76	46	18	20
3	36	163	735	308	1170	109	147	140	69	58	18	20
4	33	117	522	296	634	107	152	128	64	59	18	24
5	29	131	402	489	455	114	209	116	60	51	17	46
6	31	197	363	546	359	114	197	106	56	45	17	56
7	37	150	513	417	513	114	159	96	53	40	17	58
8	35	117	453	346	532	120	133	89	53	38	16	46
9	32	93	351	302	460	124	116	87	53	38	15	320
10	29	76	278	264	371	118	107	84	76	36	14	190
11	27	65	326	240	327	116	98	94	67	32	14	95
12	25	58	423	221	280	116	91	86	56	30	16	65
13	24	92	1250	218	260	116	86	86	59	30	24	80
14	24	93	1920	206	200	114	94	164	54	28	20	80
15	23	197	2030	209	260	111	107	312	55	28	22	63
16	22	221	1470	498	260	104	114	257	50	35	28	51
17	22	155	1200	485	257	96	133	209	47	32	28	47
18	21	126	809	432	247	94	122	170	47	28	22	60
19	21	103	551	378	234	94	122	142	46	27	20	49
20	21	85	423	342	215	94	128	122	44	26	20	43
21	21	81	348	455	190	92	164	109	43	24	25	39
22	20	919	304	551	160	89	292	100	43	22	32	37
23	27	834	394	428	160	116	351	94	42	22	31	33
24	36	1460	772	346	160	133	264	100	44	21	36	32
25	103	1620	561	289	140	114	234	128	43	20	67	30
26	124	1480	406	247	140	107	427	111	40	20	37	29
27	86	724	333	218	120	104	371	116	38	20	30	28
28	64	471	285	200	120	102	278	116	36	20	26	28
29	65	411	307	182	---	98	224	111	35	20	24	27
30	211	344	485	170	---	91	194	100	37	19	23	26
31	182	---	406	178	---	86	---	92	---	18	24	---
TOTAL	1526	10944	19194	10077	9257	3336	5312	4004	1570	971	737	1744
MEAN	49.2	365	619	325	331	108	177	129	52.3	31.3	23.8	58.1
MAX	211	1620	2030	551	1170	133	427	312	84	59	67	320
MIN	20	58	278	170	120	86	82	84	35	18	14	20
CFSM	.68	5.06	8.59	4.51	4.59	1.50	2.46	1.79	.73	.43	.33	.81
IN.	.79	5.65	9.90	5.20	4.78	1.72	2.74	2.07	.81	.50	.38	.90
AC-FT	3030	21710	38070	19990	18360	6620	10540	7940	3110	1930	1460	3460

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CAL YR 1977  TOTAL  52757.3  MEAN 145  MAX  2030  MIN  7.6  CFSM 2.01  IN 27.22  AC-FT  104600
WTR YR 1978  TOTAL  68672.0  MEAN 188  MAX  2030  MIN 14    CFSM 2.61  IN 35.43  AC-FT  136200
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NOTE.--No gage-height record Jan. 3 to Feb. 13.

14152500 COAST FORK WILLAMETTE RIVER AT LONDON, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: July 1960 to September 1965, June 1967 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 25.5°C July 7, 1968, Aug. 11, 1971; minimum, 0.0°C Jan. 9, 1974, Feb. 5, 6, 1976, Nov. 28, 29, 1976, Jan. 6-10, 26-30, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 24.5°C Aug. 8, 9; minimum, 2.0°C Nov. 20, 21.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.0	9.5	11.0	9.0	9.5	8.0	5.5	5.0	7.5	6.0	6.0	4.5
2	11.5	9.5	10.5	8.0	10.0	9.0	5.5	5.0	8.0	6.5	6.5	4.0
3	11.0	9.5	8.0	6.5	10.0	9.0	7.5	5.0	9.0	7.5	9.0	5.5
4	12.0	9.5	7.5	5.5	9.5	8.0	7.5	6.0	9.5	7.0	8.0	6.5
5	13.0	9.5	9.0	7.0	8.5	7.5	7.5	7.0	9.5	8.0	8.5	6.5
6	11.0	10.0	9.0	7.5	9.5	8.0	8.0	7.0	9.0	7.0	9.5	7.0
7	12.0	10.0	9.0	7.5	9.0	6.5	8.0	6.5	9.0	7.0	9.5	7.5
8	11.0	9.0	7.0	5.5	6.5	6.0	9.0	7.0	8.0	6.5	9.5	8.0
9	11.0	7.5	6.5	4.5	7.5	5.5	9.0	8.0	7.5	6.0	10.5	7.5
10	11.0	7.0	8.0	6.0	8.5	7.5	8.5	7.0	6.0	5.0	8.5	6.5
11	11.5	8.0	8.0	7.0	9.0	8.0	8.0	6.0	5.5	4.5	8.5	6.0
12	12.0	8.5	8.5	6.5	9.0	7.5	8.0	6.0	6.5	4.5	8.0	5.5
13	13.0	9.5	8.5	7.5	10.0	9.0	8.5	7.0	7.0	5.0	8.5	6.0
14	13.5	11.0	9.0	7.5	10.0	9.5	8.0	6.5	7.5	6.0	8.5	5.0
15	13.0	10.5	10.0	8.5	9.5	7.0	8.5	7.0	6.5	5.5	8.0	4.5
16	11.5	10.0	9.0	7.5	8.5	7.0	8.5	7.0	6.5	5.0	9.5	5.5
17	11.5	9.5	7.5	6.5	8.5	7.0	8.5	7.5	7.5	6.0	11.0	6.5
18	11.5	9.0	6.0	4.5	7.5	6.5	8.5	6.5	9.0	7.0	11.5	7.0
19	12.0	9.5	4.5	3.5	6.5	5.5	8.5	7.0	8.5	7.0	12.0	8.0
20	11.0	9.5	3.5	2.0	6.0	5.5	9.0	6.5	9.0	6.5	12.5	8.0
21	11.5	8.5	3.0	2.0	7.5	6.0	8.5	7.0	9.0	6.5	12.0	8.5
22	10.5	8.0	7.0	3.0	7.5	7.0	7.5	6.5	9.5	7.0	12.0	8.5
23	12.5	10.0	8.0	7.0	8.0	7.0	6.5	5.5	9.5	7.0	10.5	8.5
24	13.5	11.0	9.5	8.0	9.0	7.5	6.0	5.5	10.0	8.0	9.5	7.0
25	12.5	11.0	10.5	9.5	7.5	6.5	7.0	5.0	9.0	6.5	11.5	7.5
26	11.0	10.0	10.0	8.5	7.5	6.5	8.0	6.5	9.0	6.5	10.5	9.0
27	10.5	9.0	9.5	8.5	6.5	6.0	7.5	6.0	8.5	6.0	11.5	8.0
28	10.0	8.5	9.5	7.5	7.5	6.0	8.0	6.0	7.0	4.5	11.0	9.0
29	10.0	8.5	10.5	9.0	8.0	7.0	8.0	6.5	---	---	11.5	10.0
30	9.5	8.5	10.0	9.0	8.0	6.5	7.5	6.5	---	---	13.0	10.0
31	9.5	8.5	---	---	6.5	5.5	7.5	6.0	---	---	11.0	9.0
MONTH	13.5	7.0	11.0	2.0	10.0	5.5	9.0	5.0	10.0	4.5	13.0	4.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.5	7.5	10.5	8.0	16.0	11.0	14.5	13.5	21.0	15.0	19.5	14.0
2	9.0	7.0	11.0	8.0	17.0	12.0	15.0	13.0	22.0	15.0	20.0	14.5
3	9.0	6.5	11.5	9.0	18.0	13.0	14.0	13.5	22.5	16.0	18.0	15.0
4	9.0	6.5	9.5	7.5	19.5	13.5	15.0	13.0	21.5	17.0	15.0	13.5
5	9.0	7.0	10.5	6.0	20.0	15.0	17.5	12.5	21.0	15.0	14.0	13.0
6	9.0	6.0	12.0	6.0	20.0	15.0	19.0	13.5	22.0	15.5	14.0	13.0
7	8.5	5.5	13.0	8.0	19.0	14.0	19.0	14.5	24.0	16.5	14.5	12.5
8	10.0	6.0	13.5	8.5	19.0	14.0	16.0	14.5	24.5	18.0	14.0	12.0
9	11.5	6.0	12.5	10.5	17.0	14.0	15.0	13.0	24.5	18.0	14.5	13.0
10	13.0	7.0	11.5	9.5	13.5	12.5	18.0	13.0	23.0	17.0	13.0	12.0
11	12.0	8.5	12.0	9.0	17.0	11.5	18.5	12.5	22.5	18.0	13.0	11.5
12	10.5	6.5	10.5	9.5	15.5	13.5	19.5	13.5	20.5	17.5	13.5	10.5
13	9.0	6.5	11.5	10.0	15.5	12.5	21.0	14.5	17.5	15.0	12.5	12.0
14	8.5	7.0	11.5	9.5	15.0	12.0	22.5	16.0	19.5	13.5	14.0	12.0
15	9.0	7.0	10.0	8.5	14.5	11.5	19.5	15.5	17.5	15.0	15.0	12.5
16	9.0	6.0	11.0	8.0	17.5	12.5	17.5	15.0	17.0	14.0	13.0	11.0
17	9.5	6.0	12.0	8.0	18.0	12.5	19.0	14.5	17.5	13.5	11.5	10.0
18	11.0	7.5	13.5	8.5	15.5	13.5	20.0	14.5	18.5	13.0	12.0	9.5
19	9.5	8.5	14.5	10.0	18.5	13.0	20.5	14.0	19.5	14.5	12.5	9.5
20	9.0	6.0	15.5	11.5	18.0	13.5	21.5	15.0	17.0	15.0	13.5	9.5
21	9.0	6.0	14.0	10.5	15.5	14.0	22.5	15.5	15.5	14.5	14.0	11.5
22	8.5	6.0	12.5	8.5	17.0	13.0	23.0	16.5	16.5	14.0	14.5	11.0
23	10.0	7.0	11.0	8.5	14.5	13.0	24.0	18.0	16.0	13.5	15.5	11.0
24	10.5	8.0	10.5	9.5	14.5	11.5	24.0	17.5	15.0	14.0	16.0	12.0
25	10.0	9.0	11.0	8.0	14.0	12.0	23.5	17.5	16.0	12.5	16.0	13.0
26	10.0	8.5	11.0	9.0	18.0	11.5	22.0	19.0	17.0	12.5	16.0	13.0
27	10.0	8.5	12.0	9.5	19.5	13.0	21.0	16.0	18.5	13.0	16.0	13.5
28	10.5	8.5	11.5	10.0	19.0	15.0	20.0	15.5	19.5	13.5	16.0	12.0
29	11.5	8.0	13.5	8.0	16.5	15.0	21.5	15.0	20.0	14.5	15.5	11.0
30	9.5	8.5	13.5	8.5	15.5	14.0	22.0	16.0	18.0	15.5	14.5	12.5
31	---	---	15.0	9.5	---	---	21.5	16.0	18.0	15.0	---	---
MONTH	13.0	5.5	15.5	6.0	20.0	11.0	24.0	12.5	24.5	12.5	20.0	8.5

14153000 COTTAGE GROVE LAKE NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°43'00", long 123°02'55", in NE¼ sec.28, T.21 S., R.3 W., Lane County, Hydrologic Unit 17090002, in east abutment of dam on Coast Fork Willamette River 5.8 mi (9.3 km) south of Cottage Grove, and at mile 29.7 (47.8 km).

DRAINAGE AREA.--104 mi^2 (269 km^2).

PERIOD OF RECORD.--October 1942 to current year. Prior to October 1971, published as Cottage Grove Reservoir near Cottage Grove.

REVISED RECORDS.--WSP 1218: 1950.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed by Corps of Engineers in 1942; storage began Oct. 31, 1942. Capacity, 32,930 acre-ft (40.6 hm^3) between elevation 719.0 ft (219.15 m), outlet conduit, and 791.0 ft (241.10 m), crest of spillway. Dead storage negligible. Reservoir used for flood control and improvement of navigation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 36,750 acre-ft (45.3 hm^3) Dec. 24, 1964, elevation, 794.23 ft (242.081 m); minimum since first filling, no contents Sept. 26 to Oct. 19, 1966, and Nov. 14, 15, Nov. 20 to Dec. 8, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 32,320 acre-ft (39.9 hm^3) May 26, elevation, 790.47 ft (240.935 m); minimum, 2,510 acre-ft (3.09 hm^3) Nov. 23, elevation, 747.72 ft (227.905 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)

710.9	0	755	4,860	780	21,460
730	151	760	7,150	785	26,370
740	926	765	9,970	790	31,780
745	1,840	770	13,260	793	35,270
750	3,140	775	17,070		

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	772.57	751.18	753.05	750.23	753.45	765.25	772.77	785.70	790.20	789.54	788.78	787.54
2	771.61	750.79	751.27	750.13	755.57	765.56	773.09	785.94	790.17	789.59	788.72	787.50
3	770.84	750.13	752.13	750.14	762.62	765.85	773.46	786.18	790.12	789.63	788.65	787.45
4	770.09	749.57	750.00	750.02	761.62	766.18	773.82	786.34	790.11	789.67	788.59	787.43
5	769.29	749.62	749.22	750.70	759.56	766.54	774.39	786.49	790.10	789.70	788.51	787.28
6	768.54	749.54	749.85	750.47	759.00	766.86	774.90	786.62	790.06	789.71	788.45	787.94
7	767.76	749.18	751.62	750.13	759.48	767.19	775.33	786.72	790.05	789.71	788.40	786.47
8	766.95	749.03	752.02	750.16	760.08	767.53	775.67	786.81	790.02	789.71	788.33	785.98
9	766.14	749.12	751.45	750.12	760.00	767.85	775.93	786.90	790.01	789.71	788.26	785.61
10	765.30	749.13	750.28	749.93	759.47	768.18	776.18	787.01	790.05	789.71	788.19	785.56
11	764.43	749.08	750.12	750.16	758.57	768.49	776.37	787.15	790.09	789.69	788.10	785.16
12	763.54	748.98	750.72	750.23	757.42	768.79	776.55	787.26	790.10	789.66	788.04	784.50
13	762.62	749.28	758.15	750.22	757.35	769.10	776.72	787.35	790.10	789.63	787.99	783.67
14	761.57	749.41	767.40	750.11	758.42	769.37	776.95	787.79	790.10	789.60	787.95	782.73
15	760.62	749.77	774.20	749.96	759.65	769.59	777.23	788.45	790.10	789.56	787.93	781.73
16	759.62	749.56	775.65	750.63	760.75	769.84	777.49	788.94	790.08	789.55	787.92	780.78
17	758.58	749.40	775.53	750.60	761.39	770.04	777.83	789.30	790.05	789.54	787.90	780.30
18	757.72	749.43	772.20	750.44	761.71	770.23	778.09	789.58	790.02	789.51	787.85	780.15
19	757.04	749.32	767.44	750.15	761.98	770.37	778.39	789.78	789.98	789.49	787.80	780.19
20	756.47	749.32	761.77	749.95	762.15	770.53	778.70	789.92	789.95	789.45	787.77	779.87
21	755.88	749.63	755.95	751.24	762.41	770.65	779.13	790.07	789.92	789.42	787.75	779.36
22	755.27	749.10	751.47	751.74	762.76	770.79	779.91	790.19	789.89	789.36	787.73	778.82
23	754.74	747.83	751.18	751.58	763.10	771.21	780.82	790.30	789.86	789.32	787.70	778.30
24	754.26	753.90	752.56	749.97	763.42	771.49	781.45	790.39	789.82	789.25	787.73	777.76
25	754.08	762.24	751.32	749.83	763.73	771.72	782.05	790.46	789.79	789.19	787.78	777.18
26	754.10	766.66	749.72	749.91	764.11	771.91	783.10	790.37	789.74	789.13	787.78	776.63
27	753.46	765.53	749.48	749.97	764.46	772.09	783.90	790.15	789.70	789.07	787.76	776.07
28	752.58	761.65	749.62	749.82	764.94	772.24	784.53	790.10	789.63	789.02	787.73	775.47
29	752.08	758.41	750.45	749.92	---	772.38	785.96	790.15	789.58	788.98	787.69	774.87
30	752.17	756.18	751.05	750.85	---	772.52	785.35	790.18	789.53	788.91	787.65	774.28
31	751.95	---	750.55	752.10	---	772.64	---	790.20	---	788.85	787.61	---
MEAN	760.71	752.07	755.72	750.37	760.66	769.45	778.20	788.48	789.96	789.45	788.03	781.89
MAX	772.57	766.66	775.65	752.10	764.94	772.64	785.96	790.46	790.20	789.71	788.78	787.94
MIN	751.95	747.83	749.22	749.82	753.45	765.25	772.77	785.70	789.53	788.85	787.61	774.28
(†)	3,750	5,350	3,300	3,800	9,940	15,200	26,730	32,010	31,250	30,490	29,130	16,490
(‡)	-12,110	+1,600	-2,050	+500	+6,140	+5,260	+11,530	+5,280	-760	-760	-1,360	-12,640

CAL YR 1977 MEAN 771.04 MAX 791.00 MIN 745.31 AC-FT‡ +900
WTR YR 1978 MEAN 772.14 MAX 790.46 MIN 747.83 AC-FT‡ +630

† Contents, in acre-feet, at 2400, on last day of month.
‡ Change in contents, in acre-feet.

14153500 COAST FORK WILLAMETTE RIVER BELOW COTTAGE GROVE DAM, OR

LOCATION.--Lat 43°43'15", long 123°02'55", in NE¼ sec.28, T.21 S., R.3 W., Lane County, Hydrologic Unit 17090002, on right bank at bridge 0.3 mi (0.5 km) downstream from Cottage Grove Dam, 5.5 mi (8.8 km) south of Cottage Grove, and at mile 29.4 (47.3 km).

DRAINAGE AREA.--104 mi^2 (269 km^2).

PERIOD OF RECORD.--January 1939 to current year. Prior to October 1944, published as "near Cottage Grove."

REVISED RECORDS.--WSP 1448: 1949(M).

GAGE.--Water-stage recorder. Datum of gage is 711.00 ft (216.713 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Jan. 1 to Oct. 12, 1939, nonrecording gage and Oct. 13, 1939, to Sept. 30, 1944, water-stage recorder at several sites and datums 0.8 mi (1.3 km) downstream.

REMARKS.--Records good. Flow regulated since 1942 by Cottage Grove Lake (see station 14153000). Small diversions for irrigation above station.

AVERAGE DISCHARGE.--39 years, 277 ft^3/s (7.845 m^3/s), 36.17 in/yr (919 mm/yr), 200,700 acre-ft/yr (247 hm^3/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,910 ft^3/s (167 m^3/s) Dec. 24, 1964, gage height, 11.83 ft (3.606 m); no flow July 5-7, 1945, and for part of Aug. 24, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,700 ft^3/s (76.5 m^3/s) Dec. 19, gage height, 8.33 ft (2.539 m); minimum, 38 ft^3/s (1.08 m^3/s) Nov. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	423	296	956	522	51	51	57	69	109	47	47	47
2	419	293	745	441	143	51	55	72	109	47	47	47
3	366	289	792	437	659	51	57	75	109	47	47	47
4	318	222	997	437	1330	51	55	75	94	47	46	47
5	315	137	664	600	1230	51	55	76	85	47	46	164
6	315	219	428	801	704	52	52	75	75	47	46	312
7	312	220	441	641	490	52	45	78	72	47	46	406
8	309	156	560	495	610	52	45	78	72	47	46	398
9	305	97	600	437	690	52	46	73	73	47	46	395
10	302	92	570	395	686	52	46	69	73	47	46	395
11	299	92	527	323	677	52	45	69	73	47	46	565
12	299	86	532	323	668	53	46	70	73	47	47	704
13	296	80	289	323	372	53	46	70	73	47	47	830
14	296	81	63	323	73	53	46	70	73	47	46	782
15	293	159	432	319	75	53	46	70	75	47	47	593
16	289	286	1440	472	75	54	47	70	73	47	47	477
17	286	210	1660	727	178	54	47	70	72	47	47	312
18	237	156	2500	690	240	54	47	70	72	47	47	133
19	176	147	2480	627	243	54	47	72	72	47	47	41
20	147	105	2440	541	240	54	47	72	72	47	47	194
21	147	81	1880	423	189	54	47	72	72	47	47	283
22	145	1190	1250	708	135	54	48	72	72	47	47	283
23	145	1260	655	849	138	54	48	72	72	47	47	280
24	142	925	835	593	115	54	48	94	72	47	48	280
25	140	383	987	464	99	54	49	122	72	47	47	277
26	140	437	782	365	99	54	57	215	72	47	47	277
27	213	1340	513	323	72	54	66	286	72	47	47	277
28	243	1730	391	316	51	55	67	166	72	47	47	274
29	186	1420	343	249	---	55	67	107	72	47	47	274
30	186	987	600	131	---	55	67	107	62	47	47	270
31	240	---	645	48	---	55	---	107	---	47	47	---
TOTAL	7929	13176	27997	14343	10332	1647	1542	2863	2309	1457	1449	9664
MEAN	256	439	903	463	369	53.1	51.4	92.4	77.0	47.0	46.7	322
MAX	423	1730	2500	849	1330	55	67	286	109	47	48	830
MIN	140	80	63	48	51	51	45	69	62	47	46	41
AC-FT	15730	26130	55530	28450	20490	3270	3060	5680	4580	2890	2870	19170
MEAN†	58.9	466	870	471	479	139	245	178	64.2	34.6	24.6	110
CFSM†	.57	4.48	8.37	4.53	4.61	1.34	2.36	1.71	.62	.33	.24	1.06
IN.†	.65	5.00	9.60	5.22	4.80	1.54	2.63	1.98	.69	.38	.27	1.18
AC-FT†	3,620	27,730	53,480	28,950	26,630	8,530	14,590	10,960	3,820	2,130	1,510	6,530

CAL YR 1977 TOTAL 67,563 MEAN 185 MAX 2,500 MIN 26 AC-FT 134,000 MEAN† 186 CFSM† 1.79 IN.† 24.32 AC-FT† 134,900
WTR YR 1978 TOTAL 94,708 MEAN 259 MAX 2,500 MIN 41 AC-FT 187,900 MEAN† 260 CFSM† 2.50 IN.† 34.00 AC-FT† 188,530

† Adjusted for change in contents in Cottage Grove Lake.

14154500 ROW RIVER ABOVE PITCHER CREEK, NEAR DORENA, OR

LOCATION.--Lat 43°44'10", long 122°52'20", in NE¼ sec.24, T.21 S., R.2 W., Lane County, Hydrologic Unit 17090002, on right bank 0.5 mi (0.8 km) upstream from Pitcher Creek, 1.2 mi (1.9 km) northwest of Dorena, and at mile 13.2 (21.2 km).

DRAINAGE AREA.--211 mi^2 (546 km^2).

PERIOD OF RECORD.--September 1935 to current year. Prior to October 1949, published as "at Star."

GAGE.--Water-stage recorder. Datum of gage is 856.16 ft (260.958 m) National Geodetic Vertical Datum of 1929. Sept. 16, 1935, to Oct. 17, 1938, nonrecording gage at site 450 ft (137 m) upstream at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good. Slight regulation caused by upstream logponds. No diversion above station.

AVERAGE DISCHARGE.--43 years, 602 ft^3/s (17.05 m^3/s), 38.74 in/yr (984 mm/yr), 436,100 acre-ft/yr (538 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,100 ft^3/s (937 m^3/s) Dec. 22, 1964, gage height, 18.19 ft (5.544 m), from rating curve extended above 12,000 ft^3/s (340 m^3/s), on basis of slope-area measurement of peak flow; minimum, 10 ft^3/s (0.28 m^3/s) Sept. 24, 25, 1951, Oct. 7, 8, 1958.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft^3/s (198 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2130	*10,900	309	*10.78	3.286	Dec. 14	2000	9,920	281	10.39	3.167

Minimum, 36 ft^3/s (1.02 m^3/s) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	566	1020	897	700	315	211	810	216	83	46	71
2	155	879	1080	766	1000	292	250	706	194	177	44	65
3	123	615	3430	850	5190	277	329	556	175	202	44	61
4	102	420	1760	940	2360	280	322	470	161	200	43	68
5	90	486	1200	1160	1450	305	450	409	149	175	42	118
6	90	747	1010	1300	1120	333	512	355	137	144	41	185
7	127	588	1530	1000	1210	312	433	312	126	123	41	209
8	125	494	1320	800	1690	355	371	280	119	108	39	200
9	107	392	977	750	1470	487	329	266	119	97	37	248
10	92	316	779	750	1090	426	333	256	185	91	37	971
11	82	264	1000	700	850	383	322	305	196	84	36	785
12	75	230	1360	650	695	374	277	292	149	79	39	458
13	70	283	4470	550	565	380	248	298	148	75	59	336
14	66	462	6490	600	487	390	238	322	153	71	54	406
15	62	1090	6120	650	551	368	226	903	157	68	52	336
16	59	1020	3590	1000	575	343	233	928	146	83	96	261
17	56	652	3450	1300	617	329	258	742	130	83	171	226
18	54	507	2210	1300	785	308	245	560	121	71	93	458
19	52	406	1390	1100	928	285	245	454	116	66	67	447
20	51	335	1020	950	928	266	263	386	108	62	60	343
21	50	312	833	950	804	256	319	340	105	60	67	269
22	48	2850	754	1300	672	250	556	298	100	57	135	226
23	55	2390	1010	1100	570	333	839	269	96	54	183	189
24	71	5860	2690	950	499	390	644	253	108	53	131	163
25	185	6340	1780	750	443	326	633	261	108	52	443	142
26	348	5460	1190	700	416	285	2190	240	99	51	223	128
27	245	2430	934	600	383	266	1780	248	90	50	144	116
28	179	1580	874	550	343	248	1160	295	84	50	110	106
29	159	1510	903	500	---	235	934	312	82	50	90	99
30	719	1330	1340	480	---	243	760	271	83	49	79	93
31	652	---	1150	480	---	223	---	240	---	47	76	---
TOTAL	4560	40814	58664	26373	28391	9863	15910	12637	3960	2715	2822	7783
MEAN	147	1360	1892	851	1014	318	530	408	132	87.6	91.0	259
MAX	719	6340	6490	1300	5190	487	2190	928	216	202	443	971
MIN	48	230	754	480	343	223	211	240	82	47	36	61
CFSM	.70	6.45	8.97	4.03	4.81	1.51	2.51	1.93	.63	.42	.43	1.23
IN.	.80	7.20	10.34	4.65	5.01	1.74	2.80	2.23	.70	.48	.50	1.37
AC-FT	9040	80950	116400	52310	56310	19560	31560	25070	7850	5390	5600	15440

CAL YR 1977 TOTAL 183119 MEAN 502 MAX 6490 MIN 20 CFSM 2.38 IN 32.28 AC-FT 363200
WTR YR 1978 TOTAL 214492 MEAN 588 MAX 6490 MIN 36 CFSM 2.79 IN 37.82 AC-FT 425400

14155000 DORENA LAKE NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°47'10", long 122°57'15", in SE¼ sec.32, T.20 S., R.2 W., Lane County, Hydrologic Unit 17090002, on left end of Dorena Dam on Row River, 5.0 mi (8.0 km) east of Cottage Grove, and at mile 7.61 (12.24 km).

DRAINAGE AREA.--265 mi² (686 km²).

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1971, published as Dorena Reservoir near Cottage Grove.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with concrete outlet and spillway, completed in 1949 by Corps of Engineers; controlled storage began Oct. 11, 1949. Capacity, 77,580 acre-ft (95.7 hm³) between elevations 739.0 ft (225.25 m), sill of outlet gates, and 835.0 ft (254.51 m), crest of spillway. Dead storage, 18 acre-ft (22,200 m³) below elevation 739.0 ft (225.25 m). Reservoir used for flood control and improvement of navigation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 95,550 acre-ft (118 hm³) Dec. 23, 1964, elevation, 844.03 ft (257.260 m); minimum observed since first filling, 159 acre-ft (196,000 m³) Dec. 14, 1970, elevation, 743.60 ft (226.649 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 74,930 acre-ft (92.4 hm³) June 1, 2, elevation, 833.57 ft (254.072 m); minimum, 6,610 acre-ft (8.15 hm³) Dec. 7, elevation, 769.54 ft (234.556 m).

REVISIONS.--The figure of contents for May 31, 1969, has been revised to 72,340 acre-ft (89.2 hm³) superseding that published in WSP 2135.

Capacity table (elevation, in feet, and total contents, in acre-feet)

760	2,810	780	12,530	800	28,490	820	52,480
765	4,560	785	15,850	805	33,700	825	60,060
770	6,840	790	19,580	810	39,380	830	68,470
775	9,540	795	23,780	815	45,620	835	77,600

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	806.31	773.60	787.78	770.75	774.93	795.10	806.42	827.36	833.57	831.71	830.04	826.08
2	804.56	773.54	780.65	770.62	777.95	795.48	806.63	828.13	833.57	831.80	829.90	825.90
3	803.13	772.65	783.32	770.84	792.55	795.83	806.99	828.68	833.53	831.90	829.80	825.72
4	801.98	770.87	780.84	771.07	793.74	796.20	807.35	829.14	833.52	832.00	829.60	825.60
5	800.80	770.77	776.32	771.98	792.46	796.65	808.00	829.49	833.51	832.06	829.40	825.54
6	799.66	771.53	770.82	771.68	791.06	797.15	808.69	829.77	833.47	832.09	829.20	825.58
7	798.55	771.13	771.15	770.36	789.78	797.57	809.35	830.00	833.42	832.09	828.90	825.45
8	797.41	770.89	771.37	770.40	789.58	798.07	809.76	830.17	833.27	832.07	828.70	825.12
9	796.22	770.63	770.82	770.52	788.67	798.86	810.09	830.33	833.15	832.03	828.50	824.90
10	794.98	770.48	770.48	770.63	786.85	799.57	810.43	830.49	833.20	831.99	828.30	825.67
11	793.68	770.30	771.58	770.50	784.35	800.12	810.74	830.71	833.21	831.93	828.00	825.54
12	792.33	770.26	772.42	770.44	781.38	800.64	810.93	830.91	833.20	831.87	827.80	824.29
13	790.97	770.60	785.70	770.71	780.79	801.16	811.10	831.20	833.16	831.80	827.70	822.95
14	789.60	771.94	802.60	771.02	782.11	801.71	811.27	831.57	833.14	831.74	827.50	821.57
15	788.17	772.50	814.65	771.04	783.62	802.20	811.43	832.10	833.10	831.70	827.30	820.03
16	786.75	771.30	818.02	772.40	785.12	802.62	811.62	832.24	833.04	831.67	827.20	818.75
17	785.27	771.21	818.46	773.85	786.43	803.00	811.83	832.25	832.98	831.61	827.20	817.98
18	783.79	770.35	815.40	773.38	788.03	803.31	812.03	832.23	832.90	831.54	827.11	818.13
19	782.68	770.00	810.80	771.13	789.94	803.59	812.23	832.03	832.81	831.46	826.93	818.56
20	781.52	771.10	804.65	770.33	791.73	803.80	812.48	831.94	832.72	831.38	826.77	818.23
21	780.33	772.10	797.25	771.05	792.61	803.98	812.81	831.98	832.62	831.28	826.62	817.36
22	779.18	775.72	789.50	772.51	792.73	804.16	813.65	832.05	832.51	831.19	826.55	816.41
23	778.60	773.25	783.96	772.08	792.78	804.58	814.89	832.21	832.41	831.08	826.56	815.40
24	777.58	784.16	783.90	771.07	793.07	805.03	815.79	832.37	832.32	830.97	826.51	814.34
25	777.05	799.50	781.34	770.86	793.37	805.36	816.69	832.55	832.24	830.86	826.83	813.40
26	776.99	810.32	778.15	770.75	793.66	805.60	820.28	832.69	832.14	830.76	826.86	812.52
27	776.18	810.83	775.16	770.50	794.12	805.80	822.85	832.83	832.02	830.64	826.81	811.62
28	774.77	807.14	772.08	770.54	794.66	805.94	824.43	833.04	831.90	830.53	826.70	810.70
29	773.73	802.07	771.07	770.67	---	806.07	825.58	833.26	831.80	830.41	826.56	809.76
30	774.73	796.10	772.25	771.59	---	806.21	826.43	833.42	831.73	830.29	826.40	808.69
31	774.78	---	771.70	773.25	---	806.31	---	833.53	---	830.17	826.24	---
MEAN	787.82	778.56	785.62	771.24	788.50	801.67	813.09	831.31	832.87	831.44	827.69	819.73
MAX	806.31	810.83	818.46	773.85	794.66	806.31	826.43	833.53	833.57	832.09	830.04	826.08
MIN	773.73	770.00	770.48	770.33	774.93	795.10	806.42	827.36	831.73	830.17	826.24	808.69
(†)	9,420	24,770	7,730	8,560	23,480	35,140	62,380	74,860	71,570	68,770	62,070	37,840
(‡)	-27,510	+15,350	-17,040	+830	+14,920	+11,660	+27,240	+12,480	-3,290	-2,800	-6,700	-24,230

CAL YR 1977 MEAN 804.66 MAX 834.06 MIN 764.65 AC-FT‡ +3,250
WTR YR 1978 MEAN 805.88 MAX 833.57 MIN 770.00 AC-FT‡ +910

† Contents, in acre-feet, at 2400, on last day of month.
‡ Change in contents, in acre-feet.

14155500 ROW RIVER NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°47'35", long 122°59'25", in NE¼ sec.36, T.20 S., R.3 W., Lane County, Hydrologic Unit 17090002, on right bank 1.7 mi (2.7 km) upstream from Mosby Creek, 2.1 mi (3.4 km) downstream from Dorena Dam, 3.5 mi (5.6 km) east of Cottage Grove, and at mile 5.5 (8.8 km).

DRAINAGE AREA.--270 mi^2 (699 km^2).

PERIOD OF RECORD.--January 1939 to current year. Prior to October 1947, published as "near Dorena."

GAGE.--Water-stage recorder. Datum of gage is 685.24 ft (208.861 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Jan. 5 to Oct. 12, 1939, nonrecording gage at site 180 ft (55 m) upstream at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records excellent. Flow regulrted since October 1949 by Dorena Lake (see station 14155000). No diversion above station.

AVERAGE DISCHARGE.--39 years, 757 ft^3/s (21.44 m^3/s), 38.07 in/yr (967 mm/yr), 548,400 acre-ft/yr (676 hm^3/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft^3/s (606 m^3/s) Dec. 28, 1945, gage height, 18.20 ft (5.547 m); minimum, 0.20 ft^3/s (0.006 m^3/s) Sept. 25 to Oct. 7, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,260 ft^3/s (149 m^3/s) Dec. 17, gage height, 8.20 ft (2.499 m); minimum, 116 ft^3/s (3.29 m^3/s) Dec. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1170	946	4840	1330	227	195	215	219	227	132	132	207
2	1160	934	4040	988	400	195	215	219	243	132	132	207
3	928	928	3030	982	1080	195	203	203	243	132	163	207
4	700	910	3070	1070	2360	199	187	195	211	132	195	207
5	694	598	2910	1180	2450	199	191	195	195	132	199	207
6	688	659	2700	1710	2000	199	191	195	195	132	211	211
7	676	688	1880	1560	2010	199	191	195	195	132	211	342
8	670	587	1650	1030	2040	203	191	195	271	132	211	490
9	664	485	1380	898	2030	203	191	195	271	132	211	490
10	659	382	1070	916	2000	203	191	195	215	132	211	490
11	648	328	1000	880	1950	203	191	195	215	132	211	946
12	643	263	1480	802	1890	207	191	195	215	132	211	1520
13	637	223	820	694	988	207	191	195	215	132	211	1500
14	626	271	151	659	207	207	195	199	215	132	211	1520
15	615	730	527	736	227	207	195	653	215	132	211	1500
16	609	1290	2310	970	227	207	195	1020	215	132	211	1230
17	598	1070	4150	1480	315	211	195	922	215	132	211	838
18	538	760	5080	1850	369	211	195	766	215	132	211	425
19	460	543	5070	2000	373	211	195	766	215	132	211	195
20	425	346	5040	1410	369	211	195	532	215	132	211	587
21	420	306	5010	1170	565	211	195	382	215	132	211	904
22	415	1840	4450	1420	760	211	199	293	215	132	211	898
23	410	3580	3330	1560	682	215	203	191	215	132	211	892
24	405	3130	3040	1390	505	211	203	199	211	132	211	886
25	400	947	3030	1010	415	215	207	199	211	132	211	784
26	396	719	2490	904	415	215	215	199	211	132	211	706
27	521	770	2000	820	293	211	215	199	211	132	211	700
28	587	4340	1830	688	195	215	219	199	199	132	211	694
29	475	4920	1320	626	---	211	219	199	191	132	211	688
30	470	4830	1380	420	---	211	219	199	171	132	211	682
31	676	---	1560	211	---	215	---	211	---	132	211	---
TOTAL	18983	38323	81638	33364	27342	6413	5998	9919	6466	4092	6307	21153
MEAN	612	1277	2633	1076	977	207	200	320	216	132	203	705
MAX	1170	4920	5080	2000	2450	215	219	1020	271	132	211	1520
MIN	396	223	151	211	195	195	187	191	171	132	132	195
AC-FT	37650	76010	161900	66180	54230	12720	11900	19670	12830	8120	12510	41960
MEAN†	165	1,535	2,356	1,090	1,245	396	658	523	160	86.5	94.5	298
CFSM†	.61	5.69	8.73	4.04	4.61	1.47	2.44	1.94	.59	.32	.35	1.10
IN.†	.70	6.35	10.06	4.65	4.80	1.69	2.72	2.23	.66	.37	.41	1.23
AC-FT†	10,140	91,360	144,860	67,010	69,150	24,380	39,140	32,150	9,540	5,320	5,810	17,730

CAL YR 1977 TOTAL 220,761 MEAN 605 MAX 5,080 MIN 49 AC-FT 437,900 MEAN† 609 CFSM† 2.56 IN.† 30.64 AC-FT† 441,150
WTR YR 1978 TOTAL 259,998 MEAN 712 MAX 5,080 MIN 132 AC-FT 515,700 MEAN† 713 CFSM† 2.64 IN.† 35.88 AC-FT† 516,610

† Adjusted for change in contents in Dorena Lake.

14156500 MOSBY CREEK AT MOUTH, NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°46'35", long 122°59'55", in SE¼NW¼ sec.1, T.21 S., R.3 W., Lane County, Hydrologic Unit 17090002, on left bank 3.5 mi (5.6 km) southeast of Cottage Grove and at mile 1.0 (1.6 km).

DRAINAGE AREA.--95.3 mi^2 (246.8 km^2).

PERIOD OF RECORD.--September 1946 to current year. Monthly discharge only September 1946, published in WSP 1318.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 676.62 ft (206.234 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records good. No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--32 years, 245 ft^3/s (6.938 m^3/s), 34.91 in/yr (887 mm/yr), 177,500 acre-ft/yr (219 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft^3/s (399 m^3/s) Dec. 22, 1964, gage height, 13.37 ft (4.075 m), from rating curve extended above 4,600 ft^3/s (130 m^3/s) on basis of slope-area measurement of peak flow; minimum, 2.8 ft^3/s (0.079 m^3/s) Aug. 15, 1973, Sept. 24, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft^3/s (70.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2200	3,800	108	6.50	1.981	Feb. 3	0600	*3,990	113	*6.71	2.045
Dec. 14	2330	3,740	106	6.43	1.960						

Minimum, 6.4 ft^3/s (0.18 m^3/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	206	339	404	214	116	80	278	78	30	11	20
2	53	296	305	324	517	111	108	246	71	37	11	18
3	43	238	975	334	2850	102	160	206	64	48	11	17
4	37	150	656	365	1160	105	150	174	59	57	9.8	19
5	33	197	447	628	707	113	246	150	54	51	10	35
6	31	283	376	855	499	128	274	131	50	42	10	67
7	40	219	607	607	487	122	219	116	46	35	9.4	71
8	39	153	600	447	817	131	174	102	44	33	8.6	59
9	35	116	431	355	723	150	146	97	44	31	7.8	82
10	31	93	319	310	548	146	134	90	59	30	7.4	410
11	29	78	404	274	410	137	122	102	62	26	7.4	292
12	26	66	656	262	329	140	108	95	50	24	8.2	167
13	24	95	1840	254	266	140	100	93	50	23	12	111
14	23	119	2820	250	227	137	102	134	47	21	15	146
15	23	242	3050	250	270	125	108	365	46	21	15	119
16	21	296	1940	554	296	116	116	344	42	26	21	88
17	20	210	1560	792	287	111	140	278	38	26	28	75
18	20	163	1040	723	292	102	134	219	37	22	22	86
19	20	131	670	580	287	95	134	171	39	20	17	78
20	19	105	470	493	266	88	143	140	36	18	16	67
21	19	102	369	511	234	84	174	119	36	17	18	57
22	18	1330	300	786	202	80	315	108	36	16	26	53
23	21	1230	415	649	182	116	487	97	35	15	34	46
24	31	2150	1160	476	167	171	349	95	37	14	30	40
25	82	2340	811	365	150	140	339	102	36	14	95	37
26	171	2120	529	300	143	122	1070	95	34	13	57	35
27	119	982	393	254	137	108	829	97	31	13	38	33
28	78	656	319	223	125	97	523	105	29	13	30	30
29	67	523	329	202	---	93	371	108	28	13	24	29
30	305	437	678	178	---	88	296	97	30	13	22	28
31	262	---	554	182	---	82	---	88	---	12	22	---
TOTAL	1809	15326	25353	13187	12792	3596	7651	4642	1348	774	653.6	2415
MEAN	58.4	511	818	425	457	116	255	150	44.9	25.0	21.1	80.5
MAX	305	2340	3050	855	2850	171	1070	365	78	57	95	410
MIN	18	66	300	178	125	80	80	88	28	12	7.4	17
CFSM	.61	5.36	8.58	4.46	4.80	1.22	2.68	1.57	.47	.26	.22	.85
IN.	.71	5.98	9.90	5.15	4.99	1.40	2.99	1.81	.53	.30	.26	.94
AC-FT	3590	30400	50290	26160	25370	7130	15180	9210	2670	1540	1300	4790

CAL YR 1977 TOTAL 69905.0 MEAN 192 MAX 3050 MIN 6.0 CFSM 2.02 IN 27.29 AC-FT 138700
WTR YR 1978 TOTAL 89546.6 MEAN 245 MAX 3050 MIN 7.4 CFSM 2.57 IN 34.95 AC-FT 177600

14157500 COAST FORK WILLAMETTE RIVER NEAR GOSHEN, OR

LOCATION.--Lat 43°58'50", long 122°57'55", in NW¼ sec.29, T.18 S., R.2 W., Lane County, Hydrologic Unit 17090002, on right bank at downstream side of bridge on State Highway 58, 2.5 mi (4.0 km) southeast of Goshen, and at mile 6.4 (10.3 km).

DRAINAGE AREA.--642 mi² (1,663 km²).

PERIOD OF RECORD.--August 1905 to February 1912, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1248: 1905-12. WSP 1935: 1956.

GAGE.--Water-stage recorder. Datum of gage is 473.80 ft (144.414 m) National Geodetic Vertical Datum of 1929. Aug. 23, 1905, to Feb. 7, 1912, nonrecording gage at site 600 ft (183 m) upstream at different datum.

REMARKS.--Records good. Flow regulated since 1942 by Cottage Grove Lake (see station 14153000) and since 1949 by Dorena Lake (see station 14155000). Several small diversions for logponds and irrigation above station.

AVERAGE DISCHARGE.--34 years (water years 1906-11, 1951-78), 1,671 ft³/s (47.32 m³/s), 1,211,000 acre-ft/yr (1.49 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,500 ft³/s (1,660 m³/s) Nov. 22, 1909, gage height, 19.5 ft (5.94 m), site and datum then in use, from rating curve extended above 15,000 ft³/s (425 m³/s); minimum, 36 ft³/s (1.02 m³/s) Sept. 29, 30, Oct. 11, 12, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,700 ft³/s (331 m³/s) Dec. 15, gage height, 11.46 ft (3.493 m); minimum, 185 ft³/s (5.24 m³/s) Aug. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1720	1530	6620	3010	986	539	434	940	484	267	190	297
2	1680	1580	6150	2330	1660	520	526	826	490	256	190	260
3	1550	1600	5800	2440	7420	508	598	732	478	259	192	260
4	1140	1480	5610	2440	6070	514	539	655	456	274	235	300
5	1110	1210	4800	4100	5790	514	740	612	398	274	242	300
6	1110	1150	4230	5470	4180	532	872	565	383	267	259	480
7	1090	1360	4150	4080	3730	520	685	539	358	256	259	600
8	1070	1090	3440	2820	4330	565	591	520	379	245	252	800
9	1060	910	3080	2360	4190	571	539	508	434	245	249	900
10	1040	685	2490	2190	3910	552	502	508	398	242	249	1000
11	1020	584	2450	2030	3600	545	478	539	403	232	242	1200
12	1000	526	3350	2080	3380	558	456	558	383	225	259	2150
13	986	456	5030	1970	2660	552	439	545	388	225	259	2120
14	977	508	7040	1890	986	545	461	724	379	215	270	2220
15	977	826	10300	1890	1260	520	558	1440	379	219	270	2200
16	959	1970	9510	2390	1120	514	571	1870	374	235	300	1960
17	940	1840	10000	4080	1170	502	591	1710	366	232	307	1410
18	872	1260	10600	4310	1360	484	558	1380	354	228	304	959
19	708	1100	9400	4220	1320	467	545	1300	354	225	297	370
20	598	757	8850	3460	1270	456	584	1100	350	222	293	565
21	584	565	8210	2910	1260	445	655	724	346	209	297	1280
22	578	2820	7050	3990	1420	434	1140	670	334	198	300	1280
23	578	7240	5420	3990	1350	502	1480	484	334	198	304	1270
24	571	7210	6410	3330	1160	626	1120	508	346	195	307	1250
25	598	7030	5970	2470	930	545	986	552	350	192	354	1190
26	700	5920	4910	2160	940	502	2170	578	346	192	346	1050
27	724	5230	3600	1950	863	478	1890	716	338	195	311	1030
28	1050	7180	3200	1710	565	461	1380	670	318	195	304	1010
29	748	7760	2620	1580	---	450	1160	539	307	195	300	1010
30	950	6800	3620	1320	---	450	986	508	304	198	297	986
31	1110	---	3600	826	---	439	---	490	---	198	297	---
TOTAL	29798	80177	177510	85796	68880	15810	24234	24010	11311	7008	8535	31707
MEAN	961	2673	5726	2768	2460	510	808	775	377	226	275	1057
MAX	1720	7760	10600	5470	7420	626	2170	1870	490	274	354	2220
MIN	571	456	2450	826	565	434	434	484	304	192	190	260
AC-FT	59100	159000	352100	170200	136600	31360	48070	47620	22440	13900	16930	62890

CAL YR 1977 TOTAL 436064 MEAN 1195 MAX 10600 MIN 129 AC-FT 864900
WTR YR 1978 TOTAL 564776 MEAN 1547 MAX 10600 MIN 190 AC-FT 1120000

14158500 MCKENZIE RIVER AT OUTLET OF CLEAR LAKE, OR

LOCATION.--Lat 44°21'40", long 121°59'40", in SE¼ sec.8, T.14 S., R.7 E., Linn County, Hydrologic Unit 17090004, Willamette National Forest, on west bank of Clear Lake in narrow channel, 150 ft (46 m) upstream from outlet and at mile 89.6 (144.2 km).

DRAINAGE AREA.--92.4 mi^2 (239.3 km^2), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--June 1912 to September 1915, October 1947 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1288: 1949. WSP 1318: 1915(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,015.32 ft (919.070 m) National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). June 20, 1912, to July 31, 1915, nonrecording gage at site 1.0 mi (1.6 km) north at different datum.

REMARKS.--Records excellent. Flow regulated by natural storage in lake. At high stages an undetermined flow enters numerous sinkholes in lava rock along south edge of lake above station.

AVERAGE DISCHARGE.--34 years, 477 ft^3/s (13.51 m^3/s), 70.10 in/yr (1,781 mm/yr), 345,600 acre-ft/yr (426 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,300 ft^3/s (93.5 m^3/s) Dec. 23, 1964, gage height, 8.15 ft (2.484 m); minimum, 137 ft^3/s (3.88 m^3/s) Sept. 23, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,140 ft^3/s (60.6 m^3/s) Dec. 14, gage height, 6.32 ft (1.926 m), from peak-stage indicator; minimum, 141 ft^3/s (3.99 m^3/s) Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	167	961	623	517	476	464	434	385	272	220	201
2	161	187	1090	596	527	473	464	452	379	272	218	199
3	163	202	1310	582	569	470	458	464	377	268	217	198
4	167	231	1140	576	572	464	449	464	374	265	217	198
5	167	254	1020	569	576	458	440	461	368	261	215	199
6	166	263	1020	582	599	452	428	455	366	261	213	196
7	166	272	1050	579	623	446	419	449	360	259	212	195
8	163	275	969	569	647	446	410	434	358	258	212	195
9	163	277	902	576	637	452	405	422	355	256	210	196
10	163	282	872	592	616	455	399	416	352	254	208	202
11	163	284	953	592	602	458	396	422	350	252	208	201
12	163	284	1000	606	592	458	393	419	342	250	208	202
13	162	289	1500	609	579	458	391	419	337	249	207	207
14	161	304	1900	619	562	452	391	425	334	249	205	210
15	158	319	2000	619	549	446	388	440	331	247	207	210
16	157	324	1600	626	530	437	388	458	324	245	205	210
17	156	342	1440	644	514	434	385	467	321	243	205	212
18	154	360	1330	651	498	431	379	464	319	241	204	212
19	152	366	1190	661	485	431	374	461	316	240	204	212
20	149	368	1130	654	479	431	374	461	311	238	204	212
21	148	371	1050	668	473	431	374	464	309	236	204	213
22	147	385	993	668	467	434	377	461	304	234	202	215
23	146	388	945	644	467	445	371	458	301	234	202	213
24	145	422	937	623	470	452	366	446	296	232	204	212
25	146	1080	910	609	473	455	368	431	291	231	204	210
26	148	1690	864	592	482	458	379	416	287	229	202	208
27	147	1050	819	576	479	461	377	410	284	227	202	207
28	148	857	778	559	479	464	385	402	279	225	202	204
29	153	965	746	546	---	457	393	396	277	224	202	202
30	156	1000	714	530	---	467	416	391	275	224	202	201
31	159	---	665	520	---	464	---	388	---	222	201	---
TOTAL	4854	13858	33798	18660	15063	14027	12001	13550	9862	7598	6426	6152
MEAN	157	462	1090	602	538	452	400	437	329	245	207	205
MAX	167	1690	2000	668	647	476	464	467	385	272	220	215
MIN	145	167	665	520	467	431	366	388	275	222	201	195
CFSM	1.70	5.00	11.8	6.52	5.82	4.89	4.33	4.73	3.56	2.65	2.24	2.22
IN.	1.95	5.58	13.61	7.51	6.06	5.65	4.83	5.46	3.97	3.06	2.59	2.48
AC-FT	9630	27490	67040	37010	29880	27820	23800	26880	19560	15070	12750	12200

CAL YR 1977 TOTAL 118868 MEAN 326 MAX 2000 MIN 138 CFSM 3.53 IN 47.86 AC-FT 235800
WTR YR 1978 TOTAL 155849 MEAN 427 MAX 2000 MIN 145 CFSM 4.62 IN 62.74 AC-FT 309100

NOTE.--No gage-height record Dec. 13-15.

14158790 SMITH RIVER ABOVE SMITH RIVER RESERVOIR, NEAR BELKNAP SPRINGS, OR

LOCATION.—Lat 44°20'05", long 122°02'45", in SW¼SW¼ sec. 24, T.14 S., R. 6 E., Linn County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 200 ft (61 m) upstream from Smith River Reservoir, 0.7 mi (1.1 km) downstream from Browder Creek, 10 mi (16 km) north of town of Belknap Springs, and at mile 4.4 (7.1 km).

DRAINAGE AREA.—16.2 mi² (42.0 km²).

PERIOD OF RECORD.—October 1960 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 2,610.00 ft (795.528 m) National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). Prior to Sept. 10, 1964, at datum 1.36 ft (0.475 m) higher.

REMARKS.—Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.—18 years, 92.9 ft³/s (2.631 m³/s), 77.88 in/yr (1,978 mm/yr), 67,310 acre-ft/yr (83.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,160 ft³/s (146 m³/s) Dec. 22, 1964, gage height, 11.9 ft (3.63 m), from floodmark, from rating curve extended above 560 ft³/s (15.9 m³/s), on basis of slope-area measurement of peak flow; minimum, 3.2 ft³/s (0.091 m³/s) Sept. 24-29, 1967.

EXTREMES FOR CURRENT YEAR.—Peak discharges above base of 800 ft³/s (22.7 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	unknown	*2,000	56.6	9.38	2.859	Dec. 13	1500	1,040	29.5	8.32	2.536

Minimum, 4.8 ft³/s (0.14 m³/s) Aug. 8-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	145	235	64	85	78	75	121	52	18	6.0	7.0
2	20	235	426	61	156	69	71	105	50	23	6.0	6.7
3	17	143	463	93	187	65	67	94	47	23	5.7	6.3
4	15	105	329	118	162	61	64	86	46	22	5.7	6.7
5	13	110	241	132	184	58	64	77	44	20	5.7	9.8
6	16	103	329	166	175	57	58	71	41	19	5.4	9.8
7	25	109	329	141	201	68	55	66	38	17	5.4	11
8	23	93	238	143	168	87	53	65	35	17	5.1	12
9	20	78	191	160	138	91	56	68	35	15	4.8	19
10	18	67	180	162	116	87	68	72	42	15	4.8	55
11	17	62	318	149	98	82	67	99	43	14	4.8	53
12	16	60	353	166	85	73	60	99	36	13	6.0	38
13	15	79	812	175	75	68	57	133	34	13	7.8	32
14	14	189	770	173	68	61	53	149	36	12	5.7	29
15	13	406	588	156	60	58	50	172	46	12	9.8	26
16	13	273	360	160	55	58	50	172	39	13	11	23
17	12	182	255	177	52	64	50	147	35	12	9.8	32
18	11	141	189	175	55	71	52	126	33	11	6.7	46
19	11	122	151	168	60	79	60	114	31	11	6.0	40
20	11	98	126	153	73	84	62	107	29	9.8	7.8	36
21	10	79	107	164	84	91	65	98	27	8.7	7.4	31
22	10	100	93	145	95	93	68	86	26	8.2	11	28
23	13	96	114	122	105	116	69	76	25	8.2	9.1	26
24	13	426	175	107	109	114	88	70	25	7.8	16	22
25	31	873	160	96	112	107	138	66	27	7.4	22	20
26	43	630	136	87	116	105	283	63	24	7.8	13	18
27	31	394	114	76	100	101	237	68	22	7.4	11	17
28	27	312	100	78	88	100	194	70	20	7.0	9.1	16
29	38	398	95	75	---	95	159	64	19	6.7	8.2	15
30	88	279	84	69	---	91	139	58	19	6.7	7.4	14
31	93	---	73	68	---	82	---	54	---	6.3	7.4	---
TOTAL	724	6379	8134	3979	3062	2514	2632	2916	1026	392.0	251.6	705.3
MEAN	23.4	213	262	128	109	81.1	87.7	94.1	34.2	12.6	8.12	23.5
MAX	93	873	812	177	201	116	283	172	52	23	22	55
MIN	10	60	73	61	52	57	50	54	19	6.3	4.8	6.3
CFSM	1.44	13.1	16.2	7.90	6.73	5.01	5.41	5.81	2.11	.78	.50	1.45
IN.	1.66	14.65	18.68	9.14	7.03	5.77	6.04	6.70	2.36	.90	.58	1.62
AC-FT	1440	12650	16130	7890	6070	4990	5220	5780	2040	778	499	1400

CAL YR 1977 TOTAL 28401.9 MEAN 77.8 MAX 873 MIN 3.6 CFSM 4.80 IN 65.22 AC-FT 56340
WTR YR 1978 TOTAL 32714.9 MEAN 89.6 MAX 873 MIN 4.8 CFSM 5.53 IN 75.12 AC-FT 64890

14158795 SMITH RIVER RESERVOIR NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°18'20", long 122°02'40", in SW¼SW¼ sec.36, T.14 S., R.6 E., Linn County, Hydrologic Unit 17090004, Willamette National Forest, in intake tower near left end of Smith River Dam on Smith River, 800 ft (244 m) upstream from Bunchgrass Creek, 8 mi (13 km) north of town of Belknap Springs, and at mile 2.1 (3.4 km).

DRAINAGE AREA.--18.2 mi² (47.1 km²).

PERIOD OF RECORD.--March 1963 to current year.

GAGE.--Telemark with equipment to transmit elevations at 15-minute intervals. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed in 1963 by Eugene Water and Electric Board; storage began Mar. 18, 1963. Total capacity is 15,000 acre-ft (18.5 hm³) at elevation 2,605.0 ft (794.00 m), top of spillway gates, and usable capacity is 9,900 acre-ft (12.2 hm³) between elevations 2,525.0 ft (769.62 m), minimum power pool, and 2,605.0 ft (794.00 m). Storage of 5,100 acre-ft (6.29 hm³), below elevation 2,525.0 ft (769.62 m), not normally available for release. Water used for power generation. Figures herein represent total contents.

COOPERATION.--Elevations and area-volume curves furnished by Eugene Water and Electric Board.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 15,200 acre-ft (18.7 hm³) Dec. 22, 1964, elevation, 2,606.5 ft (794.46 m); minimum, 5,700 acre-ft (7.03 hm³) Apr. 11, 14, 1964, elevation, 2,532.90 ft (772.028 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 14,470 acre-ft (17.8 hm³) Apr. 17, elevation, 2,602.17 ft (793.141 m); minimum, 11,810 acre-ft (14.6 hm³) Feb. 14, elevation, 2,585.05 ft (787.923 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30	2,601.60	14,370	-
Oct. 31	2,600.39	14,170	-230
Nov. 30	2,595.70	13,410	-760
Dec. 31	2,588.77	12,330	-1,080
CAL YR 1977	-	-	-1,900
Jan. 31	2,587.04	12,090	-240
Feb. 28	2,585.18	11,830	-260
Mar. 31	2,588.60	12,300	+470
Apr. 30	2,600.32	14,150	+1,850
May 31	2,600.23	14,140	-10
June 30	2,600.23	14,140	0
July 31	2,600.45	14,180	+40
Aug. 31	2,600.53	14,190	+10
Sept.30	2,600.39	14,170	-20
WTR YR 1978	-	-	-200

14158850 MCKENZIE RIVER BELOW TRAIL BRIDGE DAM, NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°16'05", long 122°02'55", in T.15 S., R.6 E. (unsurveyed), Linn County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 0.4 mi (0.6 km) downstream from Trail Bridge Dam, 0.5 mi (0.8 km) upstream from Anderson Creek, 5 mi (8 km) north of town of Belknap Springs, and at mile 81.5 (131.1 km).

DRAINAGE AREA.--184 mi^2 (477 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,980.00 ft (603.504 m) National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). Prior to Oct. 11, 1963, at datum 5.60 ft (1.707 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since 1963 by Smith River Reservoir (see station 14158795). Diurnal fluctuations by powerplants and by Trail Bridge reregulating reservoir upstream. Water is diverted from McKenzie River in SW¼ sec.20, T.14 S., R.7 E., to Smith River Reservoir and returned to river above station.

AVERAGE DISCHARGE.--19 years, 1,053 ft^3/s (29.82 m^3/s), 77.72 in/yr (1,974 mm/yr), 762,900 acre-ft/yr (941 hm^3/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft^3/s (317 m^3/s) Dec. 22, 1964, gage height, 12.45 ft (3.795 m), from rating curve extended above 3,700 ft^3/s (105 m^3/s) on basis of slope-area measurement of peak flow; minimum, 185 ft^3/s (5.24 m^3/s) Feb. 3, 1963; minimum daily, 425 ft^3/s (12.0 m^3/s) Nov. 23, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,270 ft^3/s (149 m^3/s) Dec. 13, gage height, 10.35 ft (3.155 m); minimum, 485 ft^3/s (13.7 m^3/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	632	753	1590	1320	1110	1020	902	1030	872	712	595	610
2	558	940	2200	1300	1200	993	865	1030	842	740	595	573
3	536	782	2500	1290	1440	970	887	1020	842	753	610	573
4	573	775	2100	1270	1260	993	865	985	895	726	617	587
5	610	782	1840	1260	1360	1010	880	977	842	684	617	602
6	587	812	2020	1370	1370	1010	887	977	827	669	625	602
7	602	820	2140	1340	1330	970	887	977	827	669	625	587
8	602	812	1880	1260	1370	955	865	932	827	669	625	587
9	543	767	1650	1260	1360	977	850	887	812	692	610	595
10	543	726	1710	1330	1290	1020	842	917	805	706	580	677
11	565	790	1830	1360	1230	1040	820	1000	820	706	580	699
12	573	812	1920	1370	1190	1010	880	1010	835	669	580	669
13	565	805	4150	1320	1210	1070	895	1010	820	654	640	610
14	580	857	4660	1370	1190	1000	887	1000	782	632	640	595
15	558	1380	4070	1350	1100	932	835	1030	797	640	610	610
16	558	1210	2940	1310	1090	917	805	1110	797	677	610	662
17	551	1010	2640	1380	1060	917	820	1110	775	699	602	684
18	551	947	2350	1370	1050	955	880	1040	753	699	587	692
19	522	910	2110	1370	1040	970	925	1030	753	677	587	617
20	500	902	1920	1370	1040	993	865	1020	753	640	595	595
21	507	910	1720	1370	1040	993	857	985	760	617	617	595
22	529	970	1690	1370	1060	1000	880	985	760	617	617	625
23	536	1040	1710	1320	1100	993	940	1020	753	617	625	662
24	536	1540	1760	1270	1070	1000	925	962	746	617	617	640
25	558	3590	1760	1210	1000	947	970	910	733	625	602	625
26	587	3350	1640	1210	1040	947	1190	910	733	647	580	625
27	565	2000	1620	1200	1170	1010	1120	940	733	662	595	625
28	565	1770	1520	1140	1080	977	1050	940	726	669	602	602
29	573	1970	1520	1110	---	977	1040	917	699	654	602	587
30	647	1780	1510	1110	---	985	985	880	699	625	610	587
31	733	---	1380	1110	---	1010	---	880	---	617	610	---
TOTAL	17645	36512	66050	39990	32850	30561	27299	30421	23618	20680	18807	18599
MEAN	569	1217	2131	1290	1173	986	910	981	787	667	607	620
MAX	733	3590	4660	1380	1440	1070	1190	1110	895	753	640	699
MIN	500	726	1380	1110	1000	917	805	880	699	617	580	573
AC-FT	35000	72420	131000	79320	65160	60620	54150	60340	46850	41020	37300	36890
MEAN†	565	1,204	2,113	1,286	1,169	994	941	981	787	668	607	620
CFSM†	3.07	6.54	11.48	6.99	6.35	5.40	5.11	5.33	4.28	3.63	3.30	3.37
IN.†	3.61	7.30	13.24	8.06	6.62	6.23	5.71	6.15	4.78	4.19	3.80	3.76
AC-FT†	34,770	71,660	129,920	79,080	64,900	61,090	56,000	60,330	46,850	41,060	37,310	36,870

CAL YR 1977 TOTAL 312,562 MEAN 856 MAX 4,660 MIN 500 AC-FT 620,000 MEAN† 854 CFSM† 4.64 IN.† 63.00 AC-FT† 618,100
WTR YR 1978 TOTAL 363,032 MEAN 995 MAX 4,660 MIN 500 AC-FT 720,100 MEAN† 994 CFSM† 5.40 IN.† 73.38 AC-FT† 719,900

† Adjusted for change in contents in Smith River Reservoir.

14158850 MCKENZIE RIVER BELOW TRAIL BRIDGE DAM, NEAR BELKNAP SPRINGS, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1976 to current year.
WATER TEMPERATURES: November 1976 to current year.

INSTRUMENTATION.--Dual conductivity-temperature recorder since November 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 67 micromhos Nov. 9, 10, 1977; minimum recorded, 35 micromhos Dec. 15, 1977.
WATER TEMPERATURES: Maximum recorded, 12.0°C Aug. 1, 1977; minimum recorded, 4.0°C many days January to March 1977, Jan. 5, 6, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 67 micromhos Nov. 9, 10; minimum recorded, 35 micromhos Dec. 15.
WATER TEMPERATURES: Maximum, 11.0°C Aug. 15; minimum recorded, 4.0°C Jan. 5, 6.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	TEMPERATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)
JAN								
05...	1100	1240	4.5	--	12.2	63	19	3.7
MAY								
23...	1430	1130	7.0	6.6	12.0	51	19	3.7
SEP								
27...	1045	625	7.7	6.8	--	59	21	5.5

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)
JAN									
05...	1.6	3.0	.9	16	1.3	.8	.1	.05	.22
MAY									
23...	1.7	3.6	.9	22	1.1	.8	.1	.01	.34
SEP									
27...	1.9	4.6	1.1	26	3.8	1.1	.1	.01	.16

DATE	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	TUR-BID-ITY (JTU)
JAN								
05...	.04	.1	16	0	42	40	141	1
MAY								
23...	.03	.4	16	0	40	44	122	0
SEP								
27...	.05	.5	22	0	47	55	79.3	0

DATE	IRON, DIS-SOLVED (UG/L AS FE)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	ARSENIC DIS-SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM DIS-SOLVED (UG/L AS CD)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)
JAN											
05...	10	60	0	0	0	0	0	1	0	0	0
MAY											
23...	0	40	0	0	0	0	1	1	0	0	0
SEP											
27...	20	90	0	0	0	0	2	2	0	0	0

DATE	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SELE-NIUM, TOTAL (UG/L AS SE)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)
JAN											
05...	0	2	11	0	5	20	20	0	0	.0	.0
MAY											
23...	0	2	7	6	7	0	20	0	0	.0	.8
SEP											
27...	0	4	8	--	--	10	100	0	0	.0	.1

14158850 MCKENZIE RIVER BELOW TRAIL BRIDGE DAM, NEAR BELKNAP SPRINGS, OR—Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	63	48	41	41	---	46	48	53	58	60	60
2	50	63	47	41	41	---	46	49	53	58	60	60
3	50	63	46	41	41	---	46	49	54	58	60	60
4	50	64	47	42	41	---	47	49	53	58	60	61
5	50	64	46	39	41	---	47	50	53	59	60	61
6	49	65	46	38	40	---	47	50	53	59	60	61
7	49	65	45	39	41	---	47	50	54	59	60	62
8	49	65	45	40	41	---	47	51	54	59	60	62
9	50	66	46	40	41	---	47	51	54	59	60	61
10	51	---	46	41	41	---	47	51	55	60	61	62
11	51	---	45	40	41	---	48	52	55	60	61	62
12	51	---	45	39	41	---	48	51	55	60	60	61
13	53	---	41	39	41	---	48	51	55	60	60	61
14	53	---	38	39	41	---	48	52	56	60	60	61
15	54	---	37	39	42	---	48	52	56	60	60	61
16	54	---	38	39	42	---	49	51	56	60	60	62
17	55	---	38	39	42	---	49	51	56	60	61	62
18	56	---	38	39	42	---	49	51	56	60	60	62
19	56	---	38	39	42	---	49	51	56	60	60	61
20	57	---	39	39	42	---	49	51	56	60	60	62
21	58	---	39	39	43	---	49	51	56	60	60	62
22	59	---	40	39	43	---	50	52	57	60	60	63
23	59	---	40	39	---	---	49	52	57	60	59	62
24	60	---	41	39	---	---	49	52	57	59	60	61
25	61	---	40	40	---	---	50	52	57	60	60	61
26	61	48	41	40	---	---	49	53	58	60	60	61
27	62	49	41	40	---	43	48	53	57	60	60	61
28	62	48	41	40	---	43	48	53	57	60	60	61
29	63	47	42	41	---	44	48	53	58	60	60	61
30	63	48	41	41	---	44	48	53	58	60	59	61
31	63	---	42	41	---	45	---	53	---	60	60	---
MEAN	55	58	42	40	41	44	48	51	56	60	60	61

MPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.5	8.5	8.0	7.5	5.5	5.0	5.0	4.5	5.0	5.0	---	---
2	8.5	8.5	8.0	7.5	5.5	5.0	5.0	4.5	5.0	5.0	---	---
3	8.5	8.0	7.5	7.5	5.5	5.5	5.0	4.5	5.5	5.0	---	---
4	8.5	8.0	7.5	7.0	6.0	5.5	5.0	4.5	5.5	5.0	---	---
5	8.5	8.0	7.5	7.5	6.0	5.5	5.0	4.0	5.5	5.0	---	---
6	8.5	8.0	7.5	7.0	6.0	5.5	4.5	4.0	5.5	5.0	---	---
7	8.5	8.0	7.5	7.0	6.0	5.5	4.5	4.5	5.5	5.0	---	---
8	8.5	8.0	7.5	7.0	5.5	5.5	5.0	4.5	5.5	5.0	---	---
9	8.5	8.0	7.5	7.0	5.5	5.0	5.0	4.5	5.5	5.0	---	---
10	8.0	8.0	7.5	---	5.5	5.0	5.0	4.5	5.5	4.5	---	---
11	8.0	8.0	---	---	5.5	5.0	5.5	5.0	5.0	4.5	---	---
12	8.5	8.0	---	---	5.5	5.0	5.5	5.0	5.0	4.5	---	---
13	8.0	8.0	---	---	5.5	5.5	5.5	5.0	5.0	4.5	---	---
14	8.5	8.0	---	---	6.0	5.5	5.5	5.0	5.0	4.5	---	---
15	8.0	8.0	---	---	6.0	5.5	5.5	5.0	5.0	4.5	---	---
16	8.0	7.5	---	---	5.5	5.5	5.5	5.0	5.0	4.5	---	---
17	8.5	8.0	---	---	5.5	5.0	5.5	5.0	5.0	4.5	---	---
18	8.0	7.5	---	---	5.5	5.0	5.5	5.0	5.0	4.5	---	---
19	8.0	8.0	---	---	5.5	5.0	5.5	5.0	5.0	4.5	---	---
20	8.0	7.5	---	---	5.0	5.0	5.5	5.0	5.0	4.5	---	---
21	8.0	7.5	---	---	5.5	5.0	5.5	5.0	5.5	5.0	---	---
22	8.0	7.5	---	---	5.5	5.0	5.5	5.0	5.5	5.0	---	---
23	8.0	7.5	---	---	5.5	5.0	5.0	5.0	---	---	---	---
24	8.0	7.5	---	---	5.5	5.0	5.0	4.5	---	---	---	---
25	8.0	7.5	5.5	---	5.5	5.0	5.0	4.5	---	---	---	---
26	8.0	7.5	5.5	5.0	5.0	5.0	5.0	5.0	---	---	---	---
27	8.0	7.5	5.5	5.0	5.0	5.0	5.0	4.5	---	---	6.5	6.5
28	8.0	7.5	5.5	5.0	5.0	5.0	5.0	5.0	---	---	7.0	6.5
29	8.0	7.5	5.5	5.0	5.5	5.0	5.5	5.0	---	---	7.0	6.5
30	8.0	7.5	5.5	5.0	5.0	5.0	5.0	5.0	---	---	7.0	6.5
31	8.0	7.5	---	---	5.0	4.5	5.0	5.0	---	---	7.0	6.5
MONTH	8.5	7.5	8.0	5.0	6.0	4.5	5.5	4.0	5.5	4.5	7.0	6.5

14158850 MCKENZIE RIVER BELOW TRAIL BRIDGE DAM, NEAR BELKNAP SPRINGS, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	6.5	7.0	6.0	8.0	7.5	9.0	8.0	10.0	9.0	9.5	8.5
2	6.5	6.5	7.0	6.5	8.0	7.5	9.0	8.0	10.0	9.0	9.5	9.0
3	7.0	6.5	6.5	5.5	8.0	7.0	9.0	8.0	10.0	9.0	9.5	9.0
4	6.5	6.5	7.0	6.0	8.5	7.5	9.0	8.0	10.0	9.0	9.5	9.0
5	6.5	6.5	7.0	6.0	8.5	8.0	9.0	8.0	10.0	9.0	9.5	8.5
6	6.5	6.5	7.0	6.5	8.5	8.0	9.0	8.0	10.5	9.0	9.5	8.5
7	6.5	6.0	7.0	6.5	9.0	8.5	9.0	8.0	10.5	9.0	9.5	8.5
8	6.5	6.5	7.0	6.5	9.0	8.5	9.5	8.0	10.0	9.0	9.0	8.5
9	6.5	6.5	7.0	6.5	9.0	8.5	9.5	8.5	10.0	9.0	9.0	8.5
10	7.0	6.5	7.5	7.0	9.0	8.5	9.5	8.5	10.5	9.0	9.0	8.5
11	7.0	6.5	7.0	7.0	9.0	8.5	9.5	8.5	10.5	9.0	9.0	8.5
12	7.0	5.5	7.0	7.0	9.0	8.5	9.5	8.5	10.5	9.0	9.0	8.5
13	6.5	5.5	7.0	7.0	9.0	8.5	9.5	8.5	10.0	9.0	9.0	8.0
14	6.5	6.0	7.5	7.0	9.0	8.5	9.5	8.5	10.0	9.0	9.0	8.0
15	6.5	6.0	7.5	7.0	9.0	8.0	9.5	8.5	11.0	9.5	9.0	8.5
16	7.0	6.0	7.5	7.0	9.0	8.0	9.5	8.5	10.5	9.5	9.0	8.0
17	7.0	6.0	7.5	7.0	9.0	8.0	9.5	8.5	10.0	8.0	8.5	8.0
18	6.5	6.0	7.5	6.5	9.0	8.0	10.0	8.5	9.0	8.0	8.5	8.0
19	6.5	6.0	7.5	7.0	9.0	8.5	9.5	8.5	9.5	8.0	8.5	8.0
20	6.5	6.0	7.5	7.0	9.0	8.5	9.5	8.5	9.5	8.0	8.5	8.0
21	6.5	6.0	7.5	7.0	9.0	8.5	9.5	8.5	10.0	8.5	8.5	8.0
22	6.5	6.0	7.5	7.0	9.0	8.0	9.5	8.5	9.0	8.0	8.5	8.0
23	6.5	6.0	8.0	7.0	9.5	8.0	9.5	8.5	9.5	8.5	8.0	7.0
24	6.5	6.0	8.0	7.0	9.0	8.0	10.0	8.5	9.0	8.0	8.0	7.0
25	6.5	6.0	7.5	7.0	9.0	8.0	10.0	8.5	10.0	8.0	8.0	7.0
26	6.5	6.0	8.0	7.0	9.0	8.0	10.0	9.0	9.0	8.0	8.0	7.0
27	6.5	5.5	7.5	7.0	9.0	8.0	10.0	9.0	9.0	8.0	8.0	7.0
28	6.5	6.0	8.0	7.5	9.0	8.0	10.0	9.0	9.0	8.0	8.5	7.0
29	6.5	5.5	8.0	7.5	9.0	8.0	10.0	9.0	9.0	8.0	8.0	7.0
30	6.5	6.5	8.0	7.5	9.0	8.0	10.0	9.0	9.0	8.0	8.0	7.0
31	---	---	8.0	7.5	---	---	10.0	9.0	9.0	8.0	---	---
MONTH	7.0	5.5	8.0	5.5	9.5	7.0	10.0	8.0	11.0	8.0	9.5	7.0

14158930 BUDWORM CREEK NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°15'29", long 122°03'40", T.15 S., R.6 E., (unsurveyed), Linn County, Hydrologic Unit 17090004, Willamette National Forest, on right bank 0.1 mi (0.2 km) upstream from Deer Creek, 4.8 mi (7.7 km) north of town of Belknap Springs.

DRAINAGE AREA.--3.00 mi^2 (7.77 km^2).

PERIOD OF RECORD.--July to September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 2,040 ft (622 m), from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period July to September, 15 ft^3/s (0.42 m^3/s) Sept. 10, gage height, 1.35 ft (0.411 m); no peak above base of 150 ft^3/s (4.25 m^3/s); minimum, 1.0 ft^3/s (0.028 m^3/s) July 28 to Aug. 12, Sept. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										2.0	1.0	1.2
2										2.6	1.0	1.2
3										2.4	1.0	1.1
4										2.2	1.0	1.1
5										2.1	1.0	1.5
6										2.0	1.0	1.5
7										1.9	1.0	1.3
8										1.6	1.0	1.7
9										1.8	1.0	2.6
10										1.6	1.0	12
11										1.7	1.0	11
12										1.6	1.3	7.6
13										1.6	1.7	5.8
14										1.5	1.3	4.8
15										1.4	1.9	3.8
16										1.7	2.2	3.2
17										1.5	1.8	3.8
18										1.4	1.3	5.8
19										1.3	1.2	4.7
20										1.3	1.3	3.8
21										1.3	1.3	3.2
22										1.3	1.8	2.8
23										1.2	1.6	2.4
24										1.2	2.5	2.2
25										1.1	4.2	2.0
26										1.2	2.3	1.9
27										1.1	1.8	1.7
28										1.1	1.7	1.7
29										1.0	1.5	1.5
30										1.0	1.3	1.4
31										1.0	1.3	---
TOTAL	---	---	---	---	---	---	---	---	---	47.7	46.3	100.3
MEAN	---	---	---	---	---	---	---	---	---	1.54	1.49	3.34
MAX	---	---	---	---	---	---	---	---	---	2.6	4.2	12
MIN	---	---	---	---	---	---	---	---	---	1.0	1.0	1.1
AC-FT	---	---	---	---	---	---	---	---	---	95	92	199

14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR

LOCATION.--Lat 44°10'45", long 122°07'45", on line between NE¼ and NW¼ sec.18, T.16 S., R.6 E., Lane County, Hydrologic Unit 17090004, Willamette National Forest, on left bank 1.0 mi (1.6 km) upstream from Glen Creek, 1.7 mi (2.7 km) east of town of McKenzie Bridge, and at mile 69.9 (112.5 km).

DRAINAGE AREA.--348 mi^2 (901 km^2) at cableway 1.2 mi (1.9 km) upstream, where all discharge measurements are made.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1910 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as "near McKenzie Bridge" August 1910 to September 1911 and October 1914 to September 1916.

REVISED RECORDS.--WSP 1248: 1911-16, 1920-25. WSP 1448: 1919. WSP 1638: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,419.04 ft (432.523 m) National Geodetic Vertical Datum of 1929. Prior to June 2, 1932, nonrecording gage at several sites within 2 mi (3 km) of present site at various datums.

REMARKS.--Water-discharge records good. Flow regulated since March 1963 by Smith River Reservoir (see station 14158795). No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--68 years, 1,686 ft^3/s (47.75 m^3/s), 1,222,000 acre-ft/yr (1.51 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,100 ft^3/s (541 m^3/s) Dec. 22, 1964, gage height, 10.36 ft (3.158 m), from rating curve extended above 7,100 ft^3/s (201 m^3/s) on basis of slope-area measurement of peak flow; minimum, 805 ft^3/s (22.8 m^3/s) Oct. 20, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,930 ft^3/s (281 m^3/s) Dec. 13, gage height, 6.54 ft (1.993 m); minimum, 893 ft^3/s (25.3 m^3/s) Oct. 19-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	1400	2840	2240	1870	1660	1480	1700	1440	1240	1100	1070
2	998	1800	4010	2190	2070	1610	1400	1670	1400	1280	1100	1050
3	964	1440	4670	2190	2680	1580	1500	1620	1390	1300	1100	1030
4	989	1350	3740	2220	2350	1590	1400	1590	1440	1270	1110	1040
5	998	1350	3230	2220	2360	1600	1400	1560	1390	1220	1100	1070
6	1010	1360	3570	2360	2360	1600	1500	1550	1370	1210	1110	1080
7	1050	1370	3840	2320	2290	1580	1500	1530	1370	1210	1100	1070
8	1040	1340	3300	2220	2320	1580	1400	1490	1370	1200	1110	1070
9	989	1280	2880	2230	2270	1590	1400	1430	1360	1210	1110	1090
10	972	1400	2860	2290	2140	1620	1400	1480	1380	1230	1070	1250
11	980	1500	3120	2290	2050	1640	1400	1670	1390	1230	1060	1290
12	980	1500	3420	2330	1970	1610	1400	1670	1380	1200	1070	1220
13	972	1600	7490	2280	1960	1660	1430	1690	1370	1180	1120	1150
14	989	1700	9240	2320	1930	1590	1410	1690	1340	1160	1120	1120
15	964	1800	7720	2280	1830	1530	1380	1790	1360	1170	1100	1110
16	964	2100	5230	2220	1800	1520	1370	1850	1350	1200	1110	1140
17	956	1900	4470	2330	1770	1510	1370	1840	1330	1210	1100	1170
18	956	1700	3970	2320	1740	1530	1400	1740	1310	1210	1070	1200
19	940	1700	3500	2310	1730	1550	1440	1690	1300	1190	1070	1140
20	924	1600	3180	2270	1730	1560	1400	1670	1300	1160	1080	1100
21	932	1700	2910	2310	1720	1570	1400	1620	1290	1140	1090	1090
22	940	1800	2800	2310	1730	1570	1460	1600	1290	1140	1100	1100
23	948	2200	2830	2220	1770	1580	1510	1620	1290	1130	1100	1130
24	956	4000	3100	2130	1760	1590	1510	1580	1290	1130	1120	1110
25	1020	6500	3110	2040	1690	1530	1590	1510	1280	1130	1140	1100
26	1060	5800	2900	2020	1730	1510	2120	1490	1270	1150	1090	1100
27	1020	3800	2770	1990	1830	1560	2020	1530	1270	1160	1080	1090
28	998	3200	2610	1920	1740	1530	1850	1530	1260	1170	1080	1070
29	1020	3500	2560	1880	---	1530	1790	1490	1240	1150	1070	1060
30	1230	3180	2520	1860	---	1530	1690	1450	1230	1130	1070	1050
31	1350	---	2370	1860	---	1550	---	1440	---	1120	1070	---
TOTAL	31179	66870	116760	67970	55190	48760	45320	49780	40050	36830	33920	33360
MEAN	1006	2229	3766	2193	1971	1573	1511	1606	1335	1188	1094	1112
MAX	1350	6500	9240	2360	2680	1660	2120	1850	1440	1300	1140	1290
MIN	924	1280	2370	1860	1690	1510	1370	1430	1230	1120	1060	1030
AC-FT	61840	132600	231600	134800	109500	96720	89890	98740	79440	73050	67280	66170

CAL YR 1977 TOTAL 548849 MEAN 1504 MAX 9240 MIN 924 AC-FT 1089000
WTR YR 1978 TOTAL 625989 MEAN 1715 MAX 9240 MIN 924 AC-FT 1242000

14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: November 1976 to current year.
WATER TEMPERATURES: November 1976 to current year.

INSTRUMENTATION.—Conductivity and temperature recorder since November 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum recorded, 78 micromhos Jan. 2, 1977; minimum, 22 micromhos Nov. 25, 1977.
WATER TEMPERATURES: Maximum recorded, 13.5°C Aug. 1, 3, 1977; minimum recorded, 3.5°C Jan. 5, 8, 9, 1977.

EXTREMES FOR CURRENT YEAR.—
SPECIFIC CONDUCTANCE: Maximum, 66 micromhos many days in August and September; minimum, 22 micromhos Nov. 25.
WATER TEMPERATURES: Maximum, 12.5°C many days in July and August; minimum, 4.5°C Nov. 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE (DEG C)	PH (UNITS)	OXYGEN, DISSOLVED (MG/L)	SPFCIFIC CONDUCTANCE (MICROMHOS)	SILICA, DISSOLVED (MG/L AS SIO2)	CALCIUM DISSOLVED (MG/L AS CA)
JAN 05...	1330	2200	5.0	7.2	12.0	59	20	3.5
MAY 24...	1300	1550	8.5	6.3	10.7	53	20	4.9
SEP 27...	1315	1100	9.4	6.9	13.6	60	22	4.5

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)
JAN 05...	1.6	3.1	.8	18	1.2	1.2	.1	.04	.12
MAY 24...	1.7	3.8	.9	23	1.2	1.4	.1	.01	.63
SEP 27...	1.9	4.8	1.1	26	3.0	2.0	.1	.01	.16

DATE	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER DAY)	TURBIDITY (JTU)
JAN 05...	.05	.6	15	0	40	42	238	2
MAY 24...	.03	.2	19	0	41	48	172	1
SEP 27...	.05	1.2	19	0	55	55	163	0

DATE	IRON, DISSOLVED (UG/L AS FE)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)
JAN 05...	10	110	0	0	0	0	0	2	10	0	0
MAY 24...	0	30	10	10	0	0	1	1	0	5	0
SEP 27...	20	70	0	0	0	0	3	2	0	0	1

DATE	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	SELENIUM, DISSOLVED (UG/L AS SE)	SELENIUM, TOTAL (UG/L AS SE)	MERCURY DISSOLVED (UG/L AS HG)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)
JAN 05...	0	2	20	0	7	20	20	0	0	.0	.0
MAY 24...	0	3	10	2	8	10	30	0	0	.0	.1
SEP 27...	0	6	12	--	--	20	30	0	0	.0	.1

14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR—Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	52	41	42	43	45	48	45	55	60	63	64
2	53	48	35	41	42	46	48	45	55	60	62	64
3	54	52	35	41	37	46	48	46	56	60	62	65
4	54	54	39	41	37	46	48	46	55	60	62	65
5	54	53	41	40	38	46	48	47	55	60	62	65
6	55	53	38	40	39	45	48	47	55	60	62	65
7	54	53	38	40	40	45	48	46	56	60	62	65
8	55	54	41	40	40	45	48	46	56	60	62	65
9	55	55	42	40	41	45	48	47	57	61	63	64
10	56	56	42	39	42	45	48	47	57	61	63	64
11	56	55	40	39	43	46	47	47	57	61	63	62
12	55	55	38	38	43	47	47	47	57	61	63	64
13	56	54	28	39	43	46	48	47	57	61	63	64
14	56	51	27	39	43	46	48	47	57	61	63	64
15	56	44	30	39	44	46	49	47	57	61	63	64
16	57	47	31	39	44	46	49	48	57	62	64	64
17	57	50	34	39	44	47	48	48	57	62	64	64
18	57	52	36	39	44	47	48	49	57	62	64	65
19	57	52	37	39	43	47	48	49	57	62	64	65
20	58	53	38	39	44	47	48	49	57	62	65	65
21	58	53	38	39	44	47	48	51	58	62	64	65
22	59	51	39	40	44	46	48	53	58	62	64	65
23	58	50	39	40	43	46	47	53	58	62	64	65
24	58	44	38	41	43	46	46	54	59	62	64	65
25	57	31	38	41	44	46	46	55	58	62	63	63
26	56	34	39	41	44	46	42	55	58	62	64	63
27	58	39	40	41	44	46	42	55	59	62	64	64
28	58	39	40	41	45	46	43	55	59	62	64	64
29	57	37	40	42	---	46	43	55	59	62	64	64
30	54	39	41	42	---	46	44	55	59	62	64	64
31	54	---	42	42	---	46	---	55	---	62	64	---
MEAN	56	49	38	40	42	46	47	50	57	61	63	64

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTORER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.5	8.0	8.0	7.0	7.0	6.5	5.0	5.0	6.0	6.0	6.5	5.5
2	9.5	7.5	8.0	7.0	7.0	6.5	5.5	5.0	6.0	6.0	6.5	5.5
3	9.0	7.5	7.5	6.5	7.0	6.5	6.0	5.5	7.0	6.0	6.5	5.5
4	9.5	7.5	7.0	6.0	7.0	6.5	6.0	5.5	6.5	6.0	6.5	6.0
5	9.0	7.5	7.5	7.0	7.0	6.5	6.0	5.5	6.5	6.0	6.5	6.0
6	8.0	7.5	7.5	7.0	7.0	6.5	6.0	5.5	6.5	6.0	7.0	6.0
7	9.0	7.5	7.5	6.5	6.5	6.0	6.0	5.5	6.5	6.0	6.5	6.0
8	9.0	7.5	7.0	6.0	6.5	6.0	6.0	5.5	6.0	5.5	7.0	6.0
9	9.0	7.5	7.0	6.0	6.5	6.0	6.0	6.0	6.0	5.5	7.5	6.0
10	9.0	7.0	7.0	6.0	6.5	6.0	6.5	6.0	6.0	5.0	7.5	6.0
11	9.0	7.0	7.5	6.5	6.5	6.5	6.0	5.5	6.0	5.0	6.5	6.0
12	9.0	7.5	7.0	6.5	6.5	6.5	6.5	6.0	5.5	5.0	6.5	5.5
13	9.0	7.5	7.0	6.5	7.5	6.5	6.5	6.0	6.0	5.0	6.5	6.0
14	9.0	7.5	7.0	6.5	7.5	7.0	6.5	6.0	6.0	5.5	7.0	5.5
15	9.0	7.5	7.5	7.0	7.0	6.0	6.0	6.0	6.0	5.5	7.0	5.5
16	9.0	7.5	7.0	6.5	6.5	6.0	6.5	6.0	5.5	5.0	7.5	5.5
17	9.0	7.5	6.5	6.0	6.5	6.0	6.5	6.0	6.5	5.5	8.0	6.0
18	9.0	7.5	6.0	5.5	6.5	6.0	6.0	5.5	6.5	5.5	8.0	6.0
19	9.0	7.5	5.5	5.0	6.0	6.0	6.5	6.0	6.5	5.5	8.0	6.0
20	8.5	7.0	5.0	5.0	6.0	5.5	6.5	6.0	6.5	5.5	8.0	6.0
21	8.5	7.5	5.0	5.0	6.0	6.0	6.5	5.5	6.5	6.0	7.5	6.5
22	8.5	7.0	5.5	4.5	6.0	6.0	6.0	5.5	6.5	5.5	8.0	6.5
23	8.5	7.5	6.0	5.5	6.0	6.0	6.0	5.5	6.5	6.0	7.0	6.5
24	9.0	7.5	6.0	5.5	6.0	6.0	6.0	5.0	6.5	6.0	7.0	6.5
25	8.5	8.0	6.5	6.0	6.0	6.0	6.0	5.5	6.5	6.0	8.0	6.5
26	8.5	7.5	6.5	6.0	6.0	5.5	6.0	5.5	7.0	6.0	8.5	6.5
27	8.0	7.0	6.5	6.0	6.0	5.5	6.0	5.5	6.5	6.0	8.5	6.5
28	8.0	7.0	6.5	6.0	6.0	6.0	6.0	5.5	6.5	5.5	8.5	6.5
29	7.5	7.0	7.0	6.5	6.0	5.5	6.5	5.5	---	---	8.0	6.5
30	7.5	7.0	6.5	6.5	6.0	5.0	6.5	5.5	---	---	7.5	7.0
31	7.5	7.0	---	---	6.0	5.0	6.0	5.5	---	---	8.0	6.5
MONTH	9.5	7.0	8.0	4.5	7.5	5.0	6.5	5.0	7.0	5.0	8.5	5.5

14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	6.5	8.0	7.0	11.0	7.5	9.5	9.0	12.5	9.0	11.0	8.5
2	7.0	6.0	8.0	7.0	11.0	8.0	10.0	9.0	12.5	9.5	11.5	8.5
3	8.0	6.0	8.0	7.0	11.0	8.0	9.0	8.5	12.5	9.5	10.5	9.0
4	7.5	6.5	7.5	6.5	11.0	8.0	10.5	8.5	12.5	9.5	9.0	8.5
5	7.5	6.5	8.5	6.5	11.5	8.5	11.5	8.5	12.5	9.5	9.0	8.5
6	7.5	6.0	9.0	6.0	11.0	8.5	12.0	8.5	12.5	9.5	9.5	8.5
7	7.5	6.0	9.5	7.0	11.5	8.5	12.5	8.5	12.5	9.5	9.5	8.5
8	8.5	6.0	9.5	7.0	11.5	8.5	12.5	9.0	12.5	9.5	9.0	8.0
9	9.0	6.0	8.5	7.0	10.0	8.5	12.0	9.0	12.5	9.5	9.0	8.5
10	9.5	6.5	8.0	7.0	9.0	8.5	12.0	9.0	12.5	9.5	9.5	8.5
11	9.0	6.5	7.5	7.0	11.5	8.5	12.0	8.5	12.5	9.5	9.5	8.5
12	9.0	6.0	7.5	7.0	10.0	8.5	12.0	8.5	10.5	9.5	11.5	9.0
13	7.5	6.5	8.5	7.0	10.5	8.5	12.5	9.0	11.0	9.5	11.5	8.5
14	8.0	6.5	8.0	7.0	9.5	8.5	12.5	9.0	11.0	9.0	10.5	9.0
15	7.5	6.5	8.0	7.0	10.0	8.5	11.5	9.5	10.5	9.0	9.5	9.0
16	7.0	6.5	8.5	7.0	11.5	8.0	10.0	9.5	10.5	9.5	11.0	8.5
17	7.5	6.0	9.5	7.0	11.5	8.5	12.0	9.0	10.5	8.5	11.5	8.5
18	8.0	6.5	10.0	7.0	10.0	8.5	12.5	9.0	11.5	8.5	10.5	9.0
19	7.5	6.5	10.0	7.5	12.0	8.5	12.5	9.0	11.0	8.5	9.0	8.5
20	7.5	6.0	10.0	7.5	12.0	8.5	12.5	9.0	9.5	9.0	9.0	8.5
21	7.5	6.0	8.0	7.5	12.0	9.0	12.5	9.0	9.5	8.5	9.5	8.5
22	6.5	6.0	9.0	7.0	12.0	9.0	12.0	9.0	10.0	8.5	9.5	8.0
23	7.5	6.0	8.5	7.0	9.5	9.0	12.5	9.5	10.0	8.5	9.0	8.0
24	8.0	6.5	8.5	7.0	9.5	8.5	12.5	9.5	9.0	8.5	9.5	8.5
25	7.5	7.0	9.5	7.0	9.0	8.5	12.5	9.5	11.0	8.5	9.5	8.5
26	7.0	6.5	8.5	7.5	11.5	8.5	11.5	9.5	11.0	8.0	9.5	8.0
27	7.5	6.5	8.5	7.5	12.0	8.5	12.5	9.5	11.0	8.5	10.5	8.0
28	8.0	6.5	10.0	7.5	11.0	8.5	12.5	9.5	11.5	8.5	9.0	8.5
29	8.5	6.5	10.5	7.5	10.0	9.0	12.5	9.5	11.5	8.5	10.0	8.0
30	7.5	7.0	10.5	7.0	11.5	9.0	12.5	9.5	10.5	9.0	9.5	7.5
31	---	---	10.5	7.5	---	---	12.5	9.5	9.5	9.0	---	---
MONTH	9.5	6.0	10.5	6.0	12.0	7.5	12.5	8.5	12.5	8.0	11.5	7.5

14159200 SOUTH FORK MCKENZIE RIVER ABOVE COUGAR LAKE, NEAR RAINBOW, OR

LOCATION.--Lat 44°02'50", long 122°13'00", in T.17 S., R.5 E. (unsurveyed), Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 100 ft (30 m) upstream from Tipsoo Creek, 8.0 mi (12.9 km) south of Rainbow, 9.0 mi (14.5 km) southeast of town of Blue River, and at mile 10.4 (16.7 km). Records include flow of Tipsoo Creek.

DRAINAGE AREA.--160 mi^2 (414 km^2) at cableway 0.2 mi (0.3 km) downstream, where all discharge measurements are made.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1971, published as South Fork McKenzie River above Cougar Reservoir.

REVISED RECORDS.--WSP 1638: Drainage area. WSP 1935: 1958(M).

GAGE.--Water-stage recorder. Datum of gage is 1,709.51 ft (521.059 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Water-discharge records good. No regulation or diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--21 years, 644 ft^3/s (18.24 m^3/s), 54.66 in/yr (1,388 mm/yr), 466,600 acre-ft/yr (575 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft^3/s (521 m^3/s) Dec. 22, 1964, gage height, 20.06 ft (6.114 m), from floodmark, from rating curve extended above 7,600 ft^3/s (215 m^3/s), on basis of slope-area measurement of peak flow; minimum, 182 ft^3/s (5.15 m^3/s) Aug. 17-20, 22, 23, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft^3/s (70.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2030	*8,130	230	*12.89	3.929	Dec. 14	1900	7,280	206	12.25	3.734
Dec. 3	0130	3,930	111	9.52	2.902						

Minimum, 205 ft^3/s (5.81 m^3/s) Oct. 22, 23.

REVISIONS.--Revised daily discharges in cubic feet per second, for high-water periods in water years 1961 and 1962, are given below. These figures supersede those published in WSP 1935.

Nov. 23, 1960....1,840 Nov. 24, 1960....6,010 Feb. 10, 1961....6,060 Feb. 11, 1961....4,600 Nov. 22, 1961....3,170

Month	Total	Mean	MAX	MIN	CFSM	IN.	AC-FT
November 1960	29,559	985	6,010	238	6.16	6.87	58,630
CAL YR 1960	241,363	659	6,010	203	4.12	56.12	478,700
February 1961	45,256	1,616	6,060	586	10.1	10.52	89,770
WTR YR 1961	239,928	657	6,060	199	4.11	55.78	475,900
November 1961	19,661	655	3,170	262	4.09	4.57	39,000
CAL YR 1961	243,727	668	6,060	196	4.18	56.67	483,400
WTR YR 1962	245,198	672	3,230	196	4.20	57.01	486,400

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	232	600	1390	666	580	513	500	734	401	302	240	247
2	232	955	1940	626	716	494	503	666	390	337	238	242
3	232	693	3230	654	1480	478	484	614	380	335	238	240
4	232	536	2110	708	1200	478	478	584	372	330	238	244
5	234	493	1580	734	1050	475	478	555	361	317	236	261
6	250	486	1750	760	969	472	466	526	353	309	234	265
7	298	486	1960	721	974	469	441	500	343	304	234	270
8	298	452	1540	695	964	513	427	484	335	295	232	274
9	278	415	1270	721	876	548	421	484	340	291	230	304
10	263	383	1120	783	783	526	438	487	398	287	228	478
11	250	365	1320	747	712	516	444	576	385	282	228	497
12	243	353	1530	734	658	497	430	584	359	278	236	407
13	236	406	5200	734	614	494	418	658	374	276	253	369
14	232	624	6200	747	587	478	409	650	372	272	242	353
15	227	1180	5140	769	572	463	404	801	398	270	255	330
16	225	1050	2860	774	542	457	407	810	372	282	272	312
17	220	778	2110	852	532	466	404	738	353	276	270	312
18	217	648	1630	862	542	466	398	670	343	267	249	335
19	215	551	1310	852	565	469	401	622	332	265	242	324
20	212	486	1100	838	614	472	404	595	324	261	242	309
21	210	458	969	862	626	481	415	576	314	257	247	304
22	207	726	871	857	618	491	463	545	309	255	261	297
23	217	835	867	778	614	545	491	519	304	253	259	289
24	220	2330	1150	708	606	532	513	503	312	251	278	282
25	320	5150	1110	674	595	510	599	487	317	249	364	276
26	342	4560	954	650	599	510	1230	463	304	253	287	270
27	301	2340	848	614	565	510	1230	472	295	249	267	265
28	278	1720	774	591	535	506	1050	475	297	247	259	261
29	296	1920	774	591	---	503	891	450	359	244	253	259
30	570	1630	778	565	---	526	810	433	312	242	251	255
31	551	---	725	558	---	506	---	415	---	240	249	---
TOTAL	8338	33629	56110	22425	20288	15364	16447	17676	10408	8576	7812	9131
MEAN	269	1121	1810	723	725	496	548	570	347	277	252	304
MAX	570	5150	6200	862	1480	548	1230	810	401	337	364	497
MIN	207	353	725	558	532	457	398	415	295	240	228	240
CFSM	1.68	7.01	11.3	4.52	4.53	3.10	3.43	3.56	2.17	1.73	1.58	1.90
IN.	1.94	7.82	13.05	5.21	4.72	3.57	3.82	4.11	2.42	1.99	1.82	2.12
AC-FT	16540	66700	111300	44480	40240	30470	32620	35060	20640	17010	15500	18110

CAL YR 1977 TOTAL 201739 MEAN 553 MAX 6200 MIN 184 CFSM 3.46 IN 46.90 AC-FT 400100
WTR YR 1978 TOTAL 226204 MEAN 620 MAX 6200 MIN 207 CFSM 3.88 IN 52.59 AC-FT 448700

14159200 SOUTH FORK MCKENZIE RIVER ABOVE COUGAR LAKE, NEAR RAINBOW, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1957 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 17.0°C July 8, 1968; minimum, 0.0°C Dec. 7-11, 1972.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 16.5°C July 23-25, Aug. 8; minimum, 3.0°C Dec. 31, Jan. 1, 2, Mar. 1.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.5	7.0	---	---	6.5	6.0	3.0	3.0	5.5	5.0	5.0	3.0
2	9.5	7.0	---	---	7.0	6.5	3.5	3.0	5.5	5.0	5.5	3.5
3	9.5	7.0	---	---	7.0	6.5	4.5	3.5	6.0	5.5	5.5	4.0
4	9.5	6.5	---	---	6.5	6.0	4.5	3.5	6.0	5.5	6.0	4.5
5	9.5	7.5	---	---	5.5	5.0	4.5	4.5	6.5	6.0	6.0	5.0
6	8.5	7.5	---	---	6.5	5.5	5.0	4.5	6.0	5.5	6.5	5.0
7	9.0	8.0	---	---	6.0	4.5	5.0	4.0	6.0	5.5	6.0	5.5
8	8.5	6.5	---	---	5.0	4.0	5.5	4.5	5.5	5.0	6.5	5.5
9	8.5	7.0	---	---	5.0	4.0	5.5	5.0	5.5	5.0	6.5	5.5
10	8.5	6.5	---	---	5.5	5.0	5.0	5.0	5.0	4.0	6.0	4.5
11	9.0	6.5	---	---	6.0	5.5	5.0	4.0	4.5	4.0	5.5	4.5
12	9.0	7.0	---	---	6.0	5.5	5.0	4.5	4.5	3.5	5.0	4.0
13	9.5	7.5	---	---	7.0	6.0	5.5	5.0	5.5	4.0	5.0	4.0
14	9.5	7.5	---	---	7.0	6.5	5.5	5.0	5.5	4.5	5.5	4.0
15	9.5	7.5	---	---	6.5	4.5	5.5	5.0	5.5	4.0	5.5	3.0
16	9.0	7.5	---	---	5.0	4.0	5.5	5.0	5.0	4.0	6.5	3.5
17	---	---	---	---	5.0	4.5	5.5	5.0	6.0	4.5	7.0	4.5
18	---	---	---	---	5.0	4.5	5.0	4.5	6.0	5.0	7.5	4.5
19	---	---	---	---	4.5	3.5	5.5	4.5	6.0	5.0	7.5	5.0
20	---	---	---	---	4.0	3.5	5.5	5.0	6.5	5.0	7.5	5.0
21	---	---	---	---	4.5	3.5	5.5	4.5	6.5	5.5	7.5	5.5
22	---	---	---	---	5.0	4.0	5.0	4.5	7.0	5.5	7.5	5.5
23	---	---	---	---	5.0	4.5	4.5	3.5	6.0	5.0	6.5	5.5
24	---	---	---	---	5.0	4.5	4.0	3.5	6.0	5.0	7.0	5.5
25	---	---	---	---	4.5	4.5	5.0	4.0	6.0	5.0	8.0	5.5
26	---	---	---	---	4.5	4.0	5.5	4.5	6.0	4.5	8.5	5.5
27	---	---	---	---	4.5	4.0	5.0	4.0	5.0	4.0	8.5	6.0
28	---	---	---	---	5.5	4.5	6.0	4.5	5.0	3.5	8.5	5.5
29	---	---	---	---	5.0	4.5	5.5	4.5	---	---	8.0	6.0
30	---	---	6.5	6.0	4.5	3.5	5.5	4.5	---	---	7.5	6.5
31	---	---	---	---	4.0	3.0	5.5	5.0	---	---	8.0	6.0
MONTH	9.5	6.5	6.5	6.0	7.0	3.0	6.0	3.0	7.0	3.5	8.5	3.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	5.5	7.5	6.0	12.5	7.5	11.5	10.0	15.5	10.0	13.5	9.5
2	6.5	5.0	8.0	6.0	13.5	8.0	12.0	9.5	16.0	10.0	13.5	9.5
3	6.5	4.5	8.5	6.0	13.5	8.5	10.0	9.5	16.0	10.5	12.5	10.0
4	6.5	5.0	6.5	5.0	14.5	9.0	13.5	9.0	16.0	11.0	10.0	9.5
5	6.5	5.0	8.0	5.0	14.5	9.5	14.5	9.0	15.5	10.5	10.0	9.0
6	6.5	4.5	9.0	4.5	14.5	10.0	15.0	9.5	16.0	10.5	10.0	9.0
7	7.0	4.5	10.0	5.5	14.5	9.5	15.0	10.0	16.0	11.0	10.0	9.0
8	7.5	4.5	10.5	6.0	15.0	9.5	15.5	10.5	16.5	11.0	9.5	8.0
9	8.5	4.5	9.0	7.5	11.5	9.5	15.0	9.5	16.0	11.0	10.0	9.0
10	9.5	5.5	8.5	7.0	9.5	8.5	14.0	10.0	15.0	10.5	10.0	9.0
11	8.5	5.5	8.0	6.5	13.0	8.0	14.5	9.0	15.0	10.5	10.0	9.0
12	8.0	4.5	8.0	6.0	11.0	9.0	15.0	9.0	12.5	10.5	10.5	7.5
13	6.5	5.0	8.5	7.0	10.5	8.5	15.5	10.0	12.0	10.0	9.5	8.5
14	7.0	5.5	8.0	6.5	10.5	8.5	16.0	10.0	14.0	9.0	11.0	8.5
15	6.5	5.5	8.0	6.0	11.5	8.0	14.5	11.0	11.5	9.5	10.5	9.0
16	6.0	4.5	8.5	6.0	13.0	7.5	12.0	10.5	11.0	9.5	10.0	7.5
17	7.0	4.5	10.0	5.5	14.0	8.0	15.0	10.0	11.5	9.5	9.0	7.5
18	7.5	5.0	10.5	6.0	11.5	9.5	15.5	10.0	13.0	8.5	9.0	7.5
19	6.5	5.5	11.0	7.0	14.5	9.0	15.5	10.0	13.0	9.5	9.5	6.5
20	6.5	5.0	11.0	8.0	15.0	9.5	15.5	10.0	11.0	9.5	10.0	7.0
21	6.5	4.5	8.5	7.0	15.0	10.0	15.5	10.0	10.5	9.5	9.5	8.0
22	5.5	4.5	9.0	6.5	14.5	9.5	15.5	10.5	10.5	9.5	10.0	8.0
23	7.0	5.0	9.0	6.5	11.0	9.5	16.5	11.0	11.0	8.5	10.5	7.5
24	8.0	5.5	8.0	6.0	10.5	9.0	16.5	11.0	10.5	9.5	10.5	8.0
25	7.0	6.0	9.0	6.0	10.0	8.5	16.5	11.0	11.5	9.5	11.0	8.5
26	6.5	6.0	8.0	6.5	14.0	8.5	15.5	12.0	12.5	9.0	11.5	8.5
27	6.5	6.0	9.0	7.0	14.5	8.5	15.5	10.5	13.0	8.5	11.0	9.5
28	7.5	6.0	11.0	7.5	13.0	9.5	16.0	10.5	13.5	9.0	10.5	9.0
29	8.5	6.0	11.5	7.0	12.0	10.0	16.0	10.0	14.0	9.5	10.5	7.5
30	7.0	6.0	11.5	6.5	14.0	9.5	16.0	10.5	12.0	10.0	10.5	8.0
31	---	---	12.0	6.5	---	---	15.5	10.0	11.5	10.0	---	---
MONTH	9.5	4.5	12.0	4.5	15.0	7.5	16.5	9.0	16.5	8.5	13.5	6.5

14159400 COUGAR LAKE NEAR RAINBOW, OR

LOCATION.--Lat 44°07'40", long 122°14'25", in SE¼SE¼ sec.31, T.16 S., R.5 E., Lane County, Hydrologic Unit 17090004, Willamette National Forest, in intake tower near left end of Cougar Dam on South Fork McKenzie River, 2.7 mi (4.3 km) south of Rainbow, and at mile 4.5 (7.2 km).

DRAINAGE AREA.--207 mi² (536 km²).

PERIOD OF RECORD.--October 1963 to current year. Prior to October 1971, published as Cougar Reservoir near Rainbow.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed in 1963 by the Corps of Engineers; storage began September 1963. Total capacity is 219,100 acre-ft (270 hm³) at elevation 1,699 ft (517.9 m), maximum pool, and usable capacity is 164,800 acre-ft (203 hm³) between elevations 1,516 ft (462.1 m), minimum power pool, and 1,699 ft (517.9 m). Reservoir used for flood control and power generation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 214,100 acre-ft (264 hm³) June 29, 1977, elevation, 1,695.06 ft (516.654 m); minimum, 33,690 acre-ft (41.5 hm³) Oct. 31 to Nov. 2, 1965, elevation, 1,475.40 ft (449.702 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 201,200 acre-ft (248 hm³) July 21, elevation, 1,684.64 ft (513.478 m); minimum, 68,300 acre-ft (84.2 hm³) Jan. 15, elevation, 1,538.79 ft (469.023 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)

1,510	50,920	1,650	162,300
1,550	75,940	1,696	215,300
1,600	114,800		

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1619.73	1591.96	1598.83	1543.45	1547.89	1589.14	1616.40	1647.20	1673.96	1680.93	1683.90	1675.00
2	1618.39	1593.10	1600.60	1541.15	1550.59	1590.07	1617.30	1648.38	1674.29	1681.34	1683.90	1674.00
3	1617.07	1593.04	1609.56	1540.84	1555.14	1590.93	1618.00	1649.42	1674.60	1681.71	1683.80	1673.00
4	1615.60	1592.28	1609.22	1539.48	1557.13	1591.78	1618.60	1650.37	1674.87	1682.04	1683.70	1672.10
5	1614.10	1591.47	1604.54	1539.48	1558.77	1592.71	1619.60	1651.19	1674.14	1682.35	1683.60	1671.20
6	1612.68	1590.57	1600.70	1539.57	1559.63	1593.57	1620.30	1652.00	1675.36	1682.60	1683.50	1670.40
7	1611.40	1589.48	1597.83	1539.47	1560.80	1594.44	1621.00	1652.66	1675.57	1682.90	1683.40	1669.50
8	1609.88	1588.05	1591.60	1539.26	1561.66	1595.50	1621.60	1653.27	1675.73	1683.10	1683.30	1668.70
9	1608.40	1586.00	1582.88	1539.11	1562.13	1596.63	1622.20	1653.88	1675.94	1683.30	1683.40	1668.00
10	1606.88	1583.82	1573.28	1539.22	1563.23	1597.67	1622.82	1654.54	1676.35	1683.50	1683.40	1668.00
11	1605.27	1581.61	1564.40	1539.20	1565.15	1598.73	1623.43	1655.67	1676.69	1683.80	1683.50	1668.00
12	1604.81	1579.24	1558.75	1539.06	1566.83	1599.52	1623.97	1656.65	1676.97	1683.84	1683.60	1667.60
13	1604.92	1577.09	1578.24	1538.93	1568.31	1600.70	1624.46	1657.82	1677.23	1684.01	1683.80	1667.10
14	1604.88	1576.10	1601.80	1538.80	1569.73	1601.30	1624.95	1658.99	1677.58	1684.07	1683.90	1666.40
15	1604.07	1576.78	1618.07	1538.79	1571.03	1602.10	1625.38	1660.75	1677.98	1684.08	1684.10	1665.70
16	1603.87	1574.80	1623.33	1538.80	1572.17	1602.90	1625.88	1662.39	1678.26	1684.11	1684.10	1664.90
17	1603.78	1570.63	1621.98	1539.23	1573.32	1603.60	1626.33	1663.75	1678.53	1684.20	1684.00	1664.10
18	1603.46	1566.45	1616.45	1539.77	1574.49	1604.40	1626.38	1664.93	1678.75	1684.35	1683.70	1663.40
19	1603.13	1562.55	1608.57	1539.97	1575.80	1605.20	1626.85	1665.94	1678.92	1684.49	1683.40	1662.60
20	1602.76	1558.67	1599.80	1540.11	1577.16	1606.00	1627.32	1666.85	1679.14	1684.61	1683.20	1661.80
21	1602.38	1555.18	1590.45	1541.14	1578.67	1606.80	1627.88	1667.67	1679.29	1684.64	1682.90	1661.00
22	1601.72	1552.13	1580.28	1541.81	1580.28	1607.70	1628.71	1668.44	1679.40	1684.63	1682.80	1660.10
23	1601.15	1548.27	1571.95	1542.03	1581.70	1608.70	1629.57	1669.13	1679.50	1684.59	1682.30	1659.10
24	1599.82	1555.49	1567.43	1541.88	1583.11	1609.70	1630.46	1669.73	1679.66	1684.50	1681.70	1658.20
25	1598.44	1580.09	1565.87	1541.56	1584.46	1610.60	1631.76	1670.35	1679.81	1684.50	1681.10	1657.20
26	1597.85	1597.00	1562.83	1541.10	1585.84	1611.40	1635.65	1670.87	1679.96	1684.40	1680.30	1655.90
27	1596.32	1600.92	1558.50	1541.24	1587.05	1612.30	1639.16	1671.50	1680.09	1684.30	1679.50	1654.30
28	1594.70	1599.53	1553.73	1542.14	1588.15	1613.10	1641.93	1672.14	1680.26	1684.30	1678.60	1652.80
29	1593.18	1602.51	1549.76	1543.12	---	1613.90	1643.97	1672.69	1680.47	1684.20	1677.70	1651.20
30	1592.80	1602.86	1547.38	1544.26	---	1614.60	1645.72	1673.16	1680.66	1684.10	1676.80	1649.60
31	1592.39	---	1545.57	1545.97	---	1615.60	---	1673.59	---	1684.00	1675.90	---
MEAN	1604.70	1580.59	1585.62	1540.64	1570.01	1602.62	1626.93	1661.48	1677.67	1683.66	1682.35	1664.03
MAX	1619.73	1602.86	1623.33	1545.97	1588.15	1615.60	1645.72	1673.59	1680.66	1684.64	1684.10	1675.00
MIN	1592.39	1548.27	1545.57	1538.79	1547.89	1589.14	1616.40	1647.20	1673.96	1680.93	1675.90	1649.60
(†)	108,300	117,200	72,880	73,150	104,800	128,600	157,900	188,200	196,500	200,400	190,900	161,900
(‡)	-25,300	+8,900	-44,320	+270	+31,650	+23,800	+29,300	+30,300	+8,300	+3,900	-9,500	-29,000

CAL YR 1977 MEAN 1614.97 MAX 1695.06 MIN 1525.88 AC-FT‡ +12,560
WTR YR 1978 MEAN 1623.64 MAX 1684.64 MIN 1538.79 AC-FT‡ +28,300

† Contents, in acre-feet, at 2400, on last day of month.
‡ Change in contents, in acre-feet.

14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW, OR

LOCATION.--Lat 44°08'10", long 122°14'50", in NE¼ sec.31, T.16 S., R.5 E., Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 0.2 mi (0.3 km) upstream from Cougar Creek, 0.6 mi (1.0 km) downstream from Cougar Dam, 2.1 mi (3.4 km) south of Rainbow, and at mile 3.9 (6.3 km).

DRAINAGE AREA.--208 mi² (539 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1947 to current year.

REVISED RECORDS.--WSP 1638: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,236.42 ft (376.861 m) National Geodetic Vertical Datum of 1929 (Bureau of Public Roads bench mark). Oct. 1 to Nov. 4, 1947, nonrecording gage at site 40 ft (12 m) upstream at datum 0.80 ft (0.244 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since 1963 by Cougar Lake (see station 14159400), usable capacity, 165,000 acre-ft (203 hm³). No diversion above station.

AVERAGE DISCHARGE.--31 years, 882 ft³/s (24.98 m³/s), 57.58 in/yr (1,463 mm/yr), 639,000 acre-ft/yr (788 hm³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,600 ft³/s (498 m³/s) Dec. 11, 1956, gage height, 8.66 ft (2.640 m), from rating curve extended above 8,100 ft³/s (229 m³/s); maximum gage height, 8.90 ft (2.713 m) Dec. 22, 1955 (backwater from debris); minimum discharge, 17 ft³/s (0.48 m³/s) Nov. 18, 1965; minimum daily, 85 ft³/s (2.41 m³/s) Apr. 26-28, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 24,500 ft³/s (694 m³/s) Dec. 28, 1945, gage height, 8.8 ft (2.68 m), from floodmarks, at Corps of Engineers gage at site 40 ft (12 m) upstream at datum 0.80 ft (0.244 m) higher; gage height at present site and datum, about 9.3 ft (2.83 m), computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,200 ft³/s (147 m³/s) Dec. 18, gage height, 4.84 ft (1.475 m); minimum, 45 ft³/s (1.27 m³/s) June 28; minimum daily, 197 ft³/s (5.58 m³/s) Aug. 9, 11-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	892	960	3630	1520	231	254	239	281	309	209	296	726
2	892	960	2300	1530	231	250	239	296	309	205	300	733
3	901	970	1140	1240	719	254	235	300	309	205	305	733
4	901	1000	3160	1010	1010	250	243	300	309	205	296	733
5	901	990	4050	980	1000	250	239	305	309	205	296	733
6	901	1000	4050	980	990	250	235	305	309	205	296	726
7	910	1000	4050	980	990	250	235	305	309	220	296	733
8	910	1150	4590	980	990	250	235	305	309	224	247	733
9	910	1330	5000	980	990	250	235	309	314	220	197	740
10	910	1320	4970	980	705	247	243	309	314	224	201	740
11	920	1320	4900	980	288	247	273	309	314	224	197	740
12	440	1340	4010	980	288	247	288	309	314	220	197	756
13	235	1350	1050	980	285	247	288	309	314	216	197	764
14	300	1360	228	980	285	247	288	309	309	273	197	764
15	589	1640	719	980	285	247	285	309	309	300	201	764
16	314	2280	2250	980	292	258	285	305	309	300	322	764
17	300	2540	3070	990	285	247	285	305	309	254	366	772
18	366	2240	4610	970	285	247	440	305	309	216	404	772
19	371	2040	5020	1050	285	243	288	305	309	216	404	764
20	371	2030	4970	1020	285	243	285	305	309	216	404	772
21	375	1720	4950	970	285	243	285	300	314	269	404	772
22	473	1890	4920	980	273	243	288	300	309	296	399	772
23	479	2400	4490	970	254	243	288	300	314	300	546	780
24	796	1430	2830	970	254	243	285	305	314	296	712	780
25	940	262	2030	970	254	243	285	309	314	296	733	788
26	670	440	2310	970	254	239	288	309	314	300	726	950
27	940	1930	2540	756	254	239	285	309	309	296	726	1030
28	950	3040	2520	479	250	239	285	309	285	296	726	1030
29	950	1680	2220	484	---	239	281	305	305	296	726	1030
30	960	2180	1750	380	---	239	281	305	262	296	726	1030
31	960	---	1530	243	---	239	---	305	---	296	726	---
TOTAL	21727	45792	99857	29262	12797	7627	8234	9441	9245	7794	12769	23924
MEAN	701	1526	3221	944	457	246	274	305	308	251	412	797
MAX	960	3040	5020	1530	1010	258	440	309	314	300	733	1030
MIN	235	262	228	243	231	239	235	281	262	205	197	726
AC-FT	43100	90830	198100	58040	25380	15130	16330	18730	18340	15460	25330	47450
MEAN†	289	1,676	2,501	948	1,027	633	767	797	448	315	257	310
CFSM†	1.39	8.06	12.02	4.56	4.94	3.04	3.69	3.83	2.15	1.51	1.24	1.49
IN.†	1.60	8.99	13.86	5.26	5.14	3.51	4.11	4.42	2.40	1.74	1.43	1.66
AC-FT†	17,800	99,730	153,780	58,310	57,030	38,930	45,630	49,030	26,640	19,360	15,830	18,450

CAL YR 1977 TOTAL 263,784 MEAN 723 MAX 5,020 MIN 85 AC-FT 523,200 MEAN† 740 CFSM† 3.56 IN.† 48.31 AC-FT† 535,760
WTR YR 1978 TOTAL 288,469 MEAN 790 MAX 5,020 MIN 197 AC-FT 572,200 MEAN† 829 CFSM† 3.99 IN.† 54.14 AC-FT† 600,500

† Adjusted for change in contents in Cougar Lake.

14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: July 1955 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: Maximum, 20.0°C July 28, 1958; minimum, 0.5°C Jan. 20-23, 1962.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum, 13.0°C Oct. 2-12, 18; minimum recorded, 5.0°C Jan. 11.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	12.5	11.0	11.0	7.0	6.5	---	---	6.0	6.0	7.0	5.5
2	13.0	12.5	11.0	11.0	7.0	7.0	---	---	6.0	6.0	6.5	5.5
3	13.0	12.5	11.0	11.0	7.0	6.5	---	---	6.5	6.0	6.0	6.0
4	13.0	12.5	11.0	11.0	7.0	7.0	---	---	6.0	6.0	6.5	6.0
5	13.0	12.5	11.0	10.5	7.0	7.0	---	---	6.0	6.0	6.5	6.0
6	13.0	12.5	10.5	10.5	7.0	7.0	---	---	6.0	6.0	7.0	6.0
7	13.0	12.5	10.5	10.5	7.0	6.5	---	---	6.5	6.0	6.5	6.0
8	13.0	12.5	10.5	10.0	7.0	6.5	---	---	6.0	6.0	6.5	6.0
9	13.0	12.5	10.0	10.0	6.5	6.5	5.5	5.5	6.5	6.0	7.0	6.0
10	13.0	12.5	10.0	9.5	6.5	6.5	5.5	5.5	6.0	6.0	7.0	6.0
11	13.0	12.5	9.5	9.5	6.5	6.0	5.5	5.0	6.0	6.0	6.5	6.0
12	13.0	12.0	9.5	9.5	6.5	6.5	5.5	5.5	6.0	6.0	7.0	6.0
13	12.5	11.5	9.5	9.5	8.0	6.5	5.5	5.5	6.5	6.0	6.5	6.0
14	13.0	11.5	9.5	9.0	7.5	7.0	5.5	5.5	6.0	6.0	6.5	6.5
15	12.5	12.5	9.0	8.5	7.0	6.5	5.5	5.5	6.0	5.5	6.5	6.5
16	12.5	12.0	8.5	8.5	6.5	6.0	6.0	5.5	6.0	5.5	7.0	6.5
17	13.0	12.0	8.5	8.5	6.5	6.5	6.0	6.0	6.0	6.0	7.0	7.0
18	13.0	11.5	8.5	8.0	6.5	6.5	6.0	5.5	6.5	6.0	7.0	7.0
19	12.5	11.5	8.0	8.0	6.5	6.5	6.0	6.0	6.5	6.0	7.0	7.0
20	12.5	11.5	---	---	6.5	---	6.0	6.0	7.0	6.0	7.0	7.0
21	13.0	12.0	---	---	---	---	6.0	6.0	7.0	6.0	7.0	7.0
22	12.5	12.0	---	---	---	---	6.0	6.0	7.0	6.0	7.0	7.0
23	12.5	12.0	7.5	7.0	---	---	6.0	5.5	6.5	6.0	7.0	7.0
24	12.0	12.0	7.5	6.5	---	---	6.0	5.5	6.5	6.0	7.0	7.0
25	12.0	12.0	8.5	7.5	---	---	6.0	5.5	6.5	6.0	7.0	7.0
26	12.0	12.0	8.0	6.0	---	---	6.0	5.5	6.5	6.0	7.0	7.0
27	12.0	12.0	6.5	6.0	---	---	6.0	5.5	7.0	6.0	7.0	7.0
28	12.0	12.0	7.0	6.5	---	---	6.0	5.5	7.0	5.5	7.0	7.0
29	12.0	11.5	6.5	6.5	---	---	6.0	5.5	---	---	7.0	7.0
30	11.5	11.0	7.0	6.5	---	---	6.0	5.5	---	---	7.0	7.0
31	11.0	11.0	---	---	---	---	6.0	6.0	---	---	7.0	7.0
MONTH	13.0	11.0	11.0	6.0	8.0	6.0	6.0	5.0	7.0	5.5	7.0	5.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	7.0	7.5	5.5	8.0	6.0	7.5	6.5	9.0	7.0	8.5	8.0
2	7.0	7.0	7.0	6.0	8.0	6.0	9.0	6.5	9.0	6.5	9.0	7.5
3	7.0	7.0	7.5	6.0	8.0	6.0	9.5	6.5	9.0	7.0	8.5	7.5
4	7.0	7.0	7.0	6.0	8.0	6.5	9.5	6.5	9.0	7.0	8.5	8.0
5	7.0	7.0	7.5	5.5	7.5	6.5	9.0	6.5	9.0	7.0	8.5	8.0
6	7.5	7.0	7.5	6.0	7.5	6.5	9.0	6.5	9.0	7.0	8.5	8.5
7	7.5	7.5	8.0	6.0	7.0	6.5	9.5	6.5	9.0	7.0	9.0	8.5
8	7.5	7.5	8.0	6.0	7.0	6.5	9.0	6.5	9.5	7.0	9.0	8.5
9	---	7.5	7.5	6.0	8.0	6.5	9.0	6.5	10.0	6.5	9.0	8.0
10	7.5	6.5	7.0	6.0	7.5	6.5	7.5	6.5	10.0	7.0	9.0	8.0
11	7.5	6.0	7.0	6.0	7.0	6.5	---	7.0	10.0	7.0	9.5	8.5
12	7.0	6.0	7.5	6.0	7.5	6.5	9.0	7.0	9.0	7.0	9.5	8.5
13	6.5	5.5	7.0	6.0	8.0	6.5	9.0	6.5	9.0	7.0	9.5	8.5
14	7.0	6.0	7.0	6.0	8.0	7.0	8.5	6.5	9.5	7.5	9.5	8.5
15	6.5	6.0	7.5	6.0	8.0	6.5	8.5	7.0	8.5	7.5	9.5	9.0
16	7.0	5.5	7.5	6.0	7.5	6.5	8.0	6.5	8.0	7.0	10.0	9.0
17	6.5	6.0	8.0	6.0	8.5	6.5	9.5	7.0	8.5	7.5	10.0	8.5
18	7.0	6.0	8.0	6.0	8.5	7.0	9.5	6.5	9.0	7.5	9.5	9.5
19	6.5	5.5	8.0	6.0	8.5	6.5	9.5	6.5	8.5	7.0	10.0	9.5
20	7.0	6.0	8.0	6.0	9.0	6.5	9.5	6.5	8.0	7.0	10.0	9.0
21	7.0	6.0	7.0	6.0	7.5	6.5	9.0	6.5	8.0	7.5	10.0	9.0
22	6.5	6.0	7.5	6.0	8.0	6.5	8.5	6.5	8.0	7.5	10.5	10.0
23	7.0	6.0	7.5	6.0	8.0	6.5	9.0	6.5	8.0	7.5	10.5	9.5
24	7.0	6.0	7.5	6.0	8.5	6.5	9.0	7.0	8.0	7.5	11.0	10.0
25	7.0	6.0	7.5	6.0	8.0	6.5	9.0	7.0	8.5	7.5	11.0	10.0
26	6.5	6.0	7.0	6.0	8.0	6.5	9.0	7.0	8.5	8.0	11.0	10.5
27	6.5	6.0	7.0	6.5	7.5	6.5	9.0	7.0	8.5	7.5	11.0	10.5
28	7.0	6.0	7.5	6.0	9.0	6.5	9.0	7.0	8.5	7.5	11.5	10.5
29	7.5	6.0	8.0	6.0	7.5	6.5	9.0	6.5	8.5	7.5	11.5	10.5
30	6.5	6.0	8.0	6.0	8.0	6.5	9.0	6.5	8.5	7.5	11.5	11.0
31	---	---	8.0	6.0	---	---	9.0	7.0	8.5	8.0	---	---
MONTH	7.5	5.5	8.0	5.5	9.0	6.0	9.5	6.5	10.0	6.5	11.5	7.5

14161100 BLUE RIVER BELOW TIDBITS CREEK, NEAR BLUE RIVER, OR

LOCATION.--Lat 44°13'05", long 122°15'50", in SE¼NE¼ sec.36, T.15 S., R.4 E., Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 0.2 mi (0.3 km) downstream from Tidbits Creek, 5.5 mi (8.8 km) northeast of town of Blue River, and at mile 8.5 (13.7 km).

DRAINAGE AREA.--45.8 mi^2 (118.6 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,386.90 ft (422.727 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Water-discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--15 years, 265 ft^3/s (7.505 m^3/s), 78.57 in/yr (1,996 mm/yr), 192,000 acre-ft/yr (237 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft^3/s (351 m^3/s) Dec. 22, 1964, gage height, 15.32 ft (4.670 m), from floodmarks, from rating curve extended above 2,800 ft^3/s (79.3 m^3/s) on basis of slope-area measurement of peak flow; minimum, 8.2 ft^3/s (0.23 m^3/s) Sept. 28, 29, Oct. 2-4, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s (56.6 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	1830	7,050	200	10.44	3.182	Dec. 13	1500	*7,730	219	*10.82	3.298

Minimum, 20 ft^3/s (0.57 m^3/s) Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	378	575	279	309	135	98	247	76	47	24	30
2	63	712	1410	249	738	123	116	212	98	58	24	28
3	54	336	1720	362	1400	116	132	186	91	54	24	28
4	46	223	946	552	764	120	137	170	85	52	23	28
5	41	233	663	581	562	117	168	157	80	49	22	41
6	42	285	1130	743	496	120	184	142	75	47	22	44
7	78	254	1360	577	496	123	160	130	70	45	22	50
8	72	218	791	513	536	151	146	122	68	42	21	67
9	59	175	545	523	429	164	146	119	68	41	21	108
10	52	145	484	526	338	149	162	119	86	40	20	287
11	48	129	1030	443	274	140	158	251	88	38	20	277
12	43	120	1390	516	230	135	139	274	75	37	22	172
13	42	175	5250	485	199	135	127	285	70	35	29	125
14	39	500	3950	471	180	135	120	295	69	35	25	105
15	37	1130	2790	409	174	130	114	436	82	34	36	88
16	36	677	1320	416	158	125	125	457	75	40	43	76
17	34	399	846	478	153	125	132	353	69	37	45	77
18	33	276	607	485	162	123	147	277	65	34	31	108
19	31	213	460	471	180	122	166	228	62	33	28	98
20	30	171	371	436	201	117	170	194	59	31	32	85
21	30	149	306	489	199	117	192	170	56	30	37	75
22	29	464	266	507	188	114	298	151	53	29	51	68
23	32	653	396	399	180	142	320	139	52	28	49	62
24	33	1630	1150	326	170	162	362	135	53	28	62	57
25	84	4190	940	285	160	142	432	132	60	27	98	54
26	139	2410	598	266	182	130	818	125	54	27	62	51
27	93	1130	445	242	164	123	641	147	51	27	49	47
28	73	857	356	228	147	117	460	166	49	26	41	45
29	78	1080	362	228	---	112	353	146	54	25	37	43
30	285	769	380	209	---	108	293	128	49	25	34	41
31	355	---	329	205	---	104	---	116	---	24	31	---
TOTAL	2189	20081	33167	12899	9369	3976	7016	6209	2042	1125	1085	2465
MEAN	70.6	669	1070	416	335	128	234	200	68.1	36.3	35.0	82.2
MAX	355	4190	5250	743	1400	164	818	457	98	58	98	287
MIN	29	120	266	205	147	104	98	116	49	24	20	28
CFSM	1.54	14.6	23.4	9.08	7.31	2.80	5.11	4.37	1.49	.79	.76	1.80
IN.	1.78	16.31	26.94	10.48	7.61	3.23	5.70	5.04	1.66	.91	.88	2.00
AC-FT	4340	39830	65790	25590	18580	7890	13920	12320	4050	2230	2150	4890

CAL YR 1977 TOTAL 91212 MEAN 250 MAX 5250 MIN 11 CFSM 5.46 IN 74.08 AC-FT 180900
WTR YR 1978 TOTAL 101623 MEAN 278 MAX 5250 MIN 20 CFSM 6.07 IN 82.54 AC-FT 201600

14161100 BLUE RIVER BELOW TIDBITS CREEK, NEAR BLUE RIVER, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: September 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 23.0°C Aug. 3, 4, 1974; minimum, 0.0°C on several days in 1969, 1971, 1972, Jan. 8, 9, 1973, Jan. 1-13, 1974, Feb. 4-7, 1976.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 22.5°C Aug. 8; minimum recorded, 1.5°C Nov. 20.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.5	9.0	9.5	8.5	---	---	3.5	2.5	5.0	4.5	8.0	3.0
2	11.5	9.0	9.0	7.5	---	---	4.0	3.0	6.0	4.5	8.0	3.5
3	11.0	9.0	8.0	6.5	---	---	4.5	4.0	7.5	6.0	8.5	5.5
4	10.5	7.0	7.5	5.5	---	---	5.5	4.5	8.5	6.0	10.5	6.5
5	11.0	9.0	8.0	6.5	---	---	5.0	4.5	8.5	7.0	9.0	6.5
6	10.0	9.5	9.0	7.0	---	---	5.5	5.0	7.0	6.0	12.0	7.5
7	11.0	9.5	8.5	6.5	---	---	5.5	4.5	7.0	6.0	10.5	8.0
8	10.5	8.5	7.0	5.5	---	---	6.0	5.0	6.0	5.0	11.5	8.5
9	10.5	8.0	7.0	5.0	---	---	6.5	5.5	6.0	4.5	11.0	7.0
10	10.5	7.0	8.0	5.5	---	---	6.5	5.5	5.0	3.5	10.0	5.0
11	11.0	7.0	9.0	7.0	---	---	6.5	4.5	5.0	2.5	7.0	5.0
12	11.5	9.0	9.0	7.5	---	---	6.0	4.5	3.5	2.0	6.5	4.0
13	12.5	10.0	9.0	8.0	---	---	6.0	4.5	5.0	2.5	6.5	4.5
14	13.0	9.5	8.5	7.5	---	---	6.5	5.5	5.5	3.5	7.5	4.0
15	12.5	10.0	9.5	8.5	---	---	6.0	4.5	5.5	3.5	7.5	3.0
16	13.0	10.5	8.5	7.0	---	---	6.5	4.5	4.5	3.5	10.5	4.0
17	12.5	9.5	7.0	5.5	---	---	6.0	5.5	6.5	4.0	13.0	6.0
18	12.5	9.5	5.5	4.0	---	---	5.5	4.5	8.0	5.0	13.5	6.5
19	12.5	10.0	4.0	3.0	---	---	6.5	4.5	9.5	4.5	13.5	7.0
20	11.0	8.5	3.0	1.5	---	---	7.5	6.0	10.5	5.0	11.5	5.5
21	11.0	9.0	3.5	3.0	5.0	---	6.5	4.0	11.0	5.5	10.0	6.0
22	10.5	7.0	---	---	5.5	4.5	5.0	4.0	11.5	6.0	9.0	6.0
23	11.5	9.5	6.5	6.0	5.5	5.0	4.5	3.0	11.5	6.5	7.5	5.5
24	12.0	10.0	7.5	6.5	6.0	5.5	4.0	2.5	10.5	8.5	8.0	6.0
25	11.0	10.0	---	---	6.0	5.5	5.0	3.0	10.0	7.5	9.5	6.5
26	10.0	9.0	---	---	6.0	5.0	6.5	4.0	9.0	6.5	10.5	6.0
27	9.5	8.0	---	---	5.5	4.5	5.5	3.0	8.5	5.5	9.5	7.0
28	9.5	8.0	---	---	6.0	5.0	6.5	4.5	8.5	4.0	9.5	6.0
29	9.5	6.0	---	---	5.5	4.0	6.5	4.0	---	---	9.0	6.5
30	9.0	8.0	---	---	5.0	4.0	6.5	3.5	---	---	9.5	8.0
31	9.0	6.5	---	---	4.5	3.0	5.5	5.0	---	---	10.5	6.0
MONTH	13.0	6.0	9.5	1.5	6.0	3.0	7.5	2.5	11.5	2.0	13.5	3.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	6.0	9.0	7.0	14.5	9.0	15.5	14.0	20.0	15.0	17.5	14.0
2	7.0	5.0	9.0	7.0	15.0	10.0	14.5	13.5	21.0	15.5	18.0	14.5
3	9.0	5.0	9.0	6.5	15.0	10.5	13.5	12.5	21.5	16.5	17.5	14.5
4	8.0	6.0	8.0	6.0	15.5	11.5	15.5	12.5	21.5	16.5	15.0	14.0
5	7.5	5.5	9.0	5.5	17.0	12.5	17.0	12.5	21.0	16.0	14.0	13.5
6	8.0	4.5	9.5	5.0	17.0	13.0	18.0	13.5	21.5	16.5	14.5	13.0
7	8.0	5.0	11.0	6.5	17.0	12.5	19.0	14.0	22.0	16.5	13.5	12.5
8	8.5	5.0	12.0	7.0	17.0	12.5	19.5	15.0	22.5	18.0	12.5	12.0
9	9.5	4.5	11.0	9.0	15.0	12.0	17.0	14.0	22.0	17.5	13.0	12.0
10	10.0	6.0	9.5	8.5	12.0	10.5	17.0	13.5	20.5	16.0	12.0	11.0
11	9.0	6.5	8.5	6.5	15.0	10.5	17.0	12.5	21.0	17.0	12.0	11.0
12	8.5	5.0	8.5	7.0	13.0	11.5	18.0	12.5	18.5	16.0	13.5	10.5
13	7.0	5.5	9.5	7.0	13.5	11.0	19.0	14.0	17.0	15.0	11.5	11.0
14	8.0	6.0	9.0	6.5	12.5	10.5	19.5	14.0	18.5	14.0	13.5	11.0
15	8.0	6.0	9.0	6.5	12.0	10.0	19.5	15.5	16.5	15.0	13.0	11.5
16	6.5	5.0	9.5	6.5	14.0	9.5	16.0	15.0	15.0	13.5	11.5	9.5
17	7.5	5.0	10.5	7.0	15.5	10.0	18.5	13.5	14.5	12.5	10.5	9.5
18	8.5	5.5	12.0	7.0	13.5	12.0	19.0	14.5	16.5	12.5	10.0	9.0
19	7.5	6.5	12.0	8.5	16.5	11.5	19.5	14.5	16.5	14.0	12.0	9.0
20	7.5	6.0	14.0	9.5	17.5	13.0	19.5	15.0	15.5	14.0	12.5	9.0
21	7.0	5.0	11.0	8.5	17.5	14.0	20.0	14.5	14.0	13.5	12.0	10.0
22	5.5	4.5	9.5	7.0	17.5	13.0	20.5	15.5	14.5	13.0	12.0	10.0
23	8.5	5.5	10.0	7.0	15.0	13.0	21.5	15.0	14.5	12.5	14.0	10.0
24	10.0	6.0	9.5	7.0	13.5	12.0	21.5	16.5	14.0	13.0	15.0	11.0
25	8.0	7.0	10.5	7.0	12.5	11.5	21.0	15.5	15.0	12.0	16.0	12.0
26	7.5	7.0	9.5	7.0	16.0	11.5	21.0	16.5	15.0	11.0	16.0	12.0
27	8.0	7.0	10.0	8.5	17.0	12.0	20.5	16.0	15.5	12.0	14.5	12.5
28	9.0	7.0	11.5	9.0	16.0	13.0	20.5	15.5	16.5	13.0	14.0	11.5
29	9.5	6.5	12.0	7.5	16.5	14.0	21.0	15.5	17.5	14.0	15.0	11.0
30	8.0	7.0	12.0	7.0	17.5	14.0	21.0	15.5	18.0	15.0	14.0	12.0
31	---	---	13.0	8.0	---	---	20.5	15.0	16.0	15.0	---	---
MONTH	10.0	4.5	14.0	5.0	17.5	9.0	21.5	12.5	22.5	11.0	18.0	9.0

14161500 LOOKOUT CREEK NEAR BLUE RIVER, OR

LOCATION.--Lat 44°12'35", long 122°15'20", in T.15 or 16 S., R.5 E. (unsurveyed), Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 6.0 mi (9.7 km) northeast of town of Blue River, and at mile 0.5 (0.8 km).

DRAINAGE AREA.--24.1 mi² (62.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECOPD.--August 1949 to September 1955, September 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,377.76 ft (419.941 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Water-discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--21 years, 130 ft³/s (3.682 m³/s), 73.25 in/yr (1,861 mm/yr), 94,180 acre-ft/yr (116 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,660 ft³/s (189 m³/s) Dec. 22, 1964, gage height, 8.88 ft (2.707 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s), on basis of slope-area measurement of peak flow; minimum, 6.4 ft³/s (0.18 m³/s) Nov. 25-30, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	1800	*3,050	86.4	*7.12	2.170	Dec. 13	1130	2,980	84.4	7.07	2.155
Dec. 2	2100	1,020	28.9	5.07	1.545						

Minimum, 12 ft³/s (0.34 m³/s) Aug. 19, Sept. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	174	276	172	144	73	55	159	60	32	16	14
2	27	269	582	161	249	67	67	139	57	42	16	13
3	24	159	758	184	484	65	70	124	54	40	16	13
4	21	117	451	218	342	69	69	115	51	38	16	13
5	20	119	300	236	281	64	73	106	49	36	16	20
6	24	121	428	262	246	63	73	96	46	34	15	20
7	42	112	498	241	230	63	69	88	43	32	15	22
8	38	98	335	225	225	69	65	82	42	30	14	32
9	31	87	256	225	198	73	64	79	42	28	14	39
10	27	78	218	225	172	67	74	78	55	28	14	107
11	24	71	304	210	152	65	75	126	53	28	14	109
12	22	67	503	215	137	63	69	126	46	26	16	83
13	21	87	2120	213	124	64	64	137	45	26	22	67
14	20	187	1540	205	114	61	61	142	43	24	14	60
15	19	498	1110	193	109	59	60	188	49	23	18	52
16	18	315	597	184	101	57	64	188	45	26	19	46
17	17	206	412	205	98	57	66	168	41	25	17	46
18	16	159	324	210	99	57	66	146	41	22	13	56
19	16	129	259	210	96	56	70	131	39	22	12	51
20	15	108	218	203	98	56	73	119	38	22	16	47
21	15	98	191	218	95	55	85	107	36	21	16	43
22	15	224	172	230	92	55	128	96	35	20	27	39
23	18	351	201	203	92	73	148	89	35	19	21	36
24	17	860	389	179	88	78	146	85	37	18	30	33
25	38	1950	370	165	85	70	172	80	39	18	49	31
26	55	1120	287	152	95	66	318	76	36	19	28	28
27	40	623	238	140	85	65	292	83	33	18	22	26
28	33	460	205	135	78	63	243	85	32	17	18	25
29	41	474	203	131	---	60	203	75	38	17	16	23
30	110	347	203	122	---	59	181	69	33	16	15	22
31	143	---	193	122	---	57	---	64	---	16	14	---
TOTAL	998	9668	14141	5994	4409	1969	3263	3446	1293	783	569	1216
MEAN	32.2	322	456	193	157	63.5	109	111	43.1	25.3	18.4	40.5
MAX	143	1950	2120	262	484	78	318	188	60	42	49	109
MIN	15	67	172	122	78	55	55	64	32	16	12	13
CFSM	1.34	13.4	18.9	8.01	6.52	2.64	4.52	4.61	1.79	1.05	.76	1.68
IN.	1.54	14.92	21.83	9.25	6.81	3.04	5.04	5.32	2.00	1.21	.88	1.88
AC-FT	1980	19180	28050	11890	8750	3910	6470	6840	2560	1550	1130	2410

CAL YR 1977 TOTAL 40945.6 MEAN 112 MAX 2120 MIN 9.0 CFSM 4.65 IN 63.20 AC-FT 81220
WTR YR 1978 TOTAL 47749.0 MEAN 131 MAX 2120 MIN 12 CFSM 5.44 IN 73.70 AC-FT 94710

14161500 LOOKOUT CREEK NEAR BLUE RIVER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1950 to September 1955, September 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 22.0°C Aug. 8, 1978; minimum, 0.0°C Jan. 31, Feb. 1, 1969, Jan. 8, 9, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 22.0°C Aug. 8; minimum, 2.0°C Jan. 1.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	9.0	8.5	8.0	7.5	7.0	4.0	2.0	5.5	5.0	5.5	3.5
2	11.0	9.5	8.0	6.5	8.0	7.5	4.0	3.5	6.0	5.0	5.5	3.5
3	10.5	9.0	7.5	6.0	8.0	7.5	4.5	4.0	6.5	6.0	6.0	4.5
4	10.5	8.5	7.0	5.5	7.5	6.5	5.0	4.5	7.0	6.0	6.5	5.0
5	11.0	9.5	7.5	7.0	6.5	6.5	5.0	5.0	7.0	6.5	6.5	5.5
6	10.0	9.0	8.0	7.0	7.5	6.5	6.0	5.0	6.5	6.0	7.5	6.0
7	11.0	9.5	8.0	7.0	6.5	5.5	6.0	5.0	6.5	6.0	7.0	6.5
8	10.0	8.0	6.5	6.0	6.0	5.0	6.0	5.5	6.0	5.5	7.5	6.5
9	10.0	8.0	6.5	5.0	6.0	5.0	6.5	6.0	6.0	5.0	8.5	6.5
10	10.0	7.5	7.0	5.5	6.5	6.0	6.5	6.0	5.0	4.5	8.0	5.5
11	10.0	7.5	7.5	6.0	7.0	6.5	6.5	5.5	4.5	3.5	7.0	5.5
12	10.0	8.0	7.5	7.0	7.0	6.5	6.0	5.5	4.0	3.5	6.5	5.0
13	11.0	9.5	7.5	7.0	8.0	7.0	6.5	5.5	5.0	3.0	6.0	5.0
14	11.0	9.0	7.5	7.0	8.0	7.5	6.5	6.5	5.0	4.0	6.5	4.5
15	10.5	9.0	8.0	7.5	7.5	6.0	6.5	6.0	5.0	4.0	6.5	3.5
16	10.5	9.5	7.5	6.5	6.0	5.0	6.5	6.0	4.5	4.0	7.5	4.0
17	10.0	8.5	6.5	5.5	6.0	5.5	6.5	6.0	5.5	4.0	8.5	5.0
18	10.0	8.5	6.5	4.5	6.0	5.5	6.0	5.5	6.0	5.0	8.5	5.5
19	10.5	9.5	5.0	3.0	5.5	5.0	6.5	5.5	6.5	4.5	9.0	5.5
20	10.0	8.0	4.0	2.5	5.0	4.5	7.0	6.0	6.5	5.0	9.5	6.0
21	10.0	9.0	4.5	3.5	5.0	5.0	6.5	5.5	7.0	5.0	9.0	6.5
22	9.5	8.0	5.5	4.5	5.5	5.0	6.0	5.0	7.0	5.0	9.5	6.5
23	10.5	9.0	6.0	5.5	5.5	5.0	5.0	4.5	7.5	5.5	8.0	7.0
24	10.5	9.0	6.5	6.0	6.0	5.5	4.5	4.0	7.0	6.0	8.0	6.5
25	10.5	9.5	7.5	6.5	6.0	5.5	5.5	4.5	7.0	6.0	9.5	6.5
26	9.5	8.5	7.5	6.5	5.5	5.0	6.0	5.0	6.5	5.5	10.5	6.5
27	9.0	8.0	7.0	6.5	5.5	4.0	5.5	4.5	6.5	5.0	10.5	7.5
28	9.0	8.0	7.0	7.0	5.5	4.5	6.0	5.0	6.0	4.0	10.0	7.0
29	8.5	8.5	8.0	7.0	5.5	4.5	6.0	5.0	---	---	10.0	7.5
30	8.5	8.0	7.5	7.0	5.5	4.5	5.5	4.5	---	---	9.5	8.0
31	8.5	7.5	---	---	5.0	4.0	5.5	5.0	---	---	9.5	7.0
MONTH	11.0	7.5	8.5	2.5	8.0	4.0	7.0	2.0	7.5	3.0	10.5	3.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	6.5			---	---	14.5	13.5	20.0	15.0	17.0	13.5
2	7.0	5.5			15.5	9.5	14.0	13.0	20.5	15.5	17.0	14.0
3	8.5	5.5			16.0	10.5	13.0	12.0	21.0	16.5	16.0	14.5
4	7.5	6.0			16.5	11.0	15.5	12.0	21.0	17.0	14.5	13.5
5	7.5	6.0			17.0	11.5	17.5	12.0	20.5	16.0	13.5	13.0
6	7.5	5.0			17.5	12.5	18.5	12.5	20.5	16.0	14.0	13.0
7	7.5	5.0			17.0	12.0	19.0	13.5	21.5	15.5	13.5	12.5
8	9.0	5.0			17.5	12.0	19.0	14.5	22.0	17.5	12.5	11.5
9	10.0	5.0			14.0	12.0	17.5	13.5	21.5	17.0	12.5	11.5
10	11.0	6.0			11.5	11.0	17.5	13.0	20.5	16.0	11.5	11.0
11	10.0	6.5			16.0	10.5	17.5	12.0	20.5	17.0	12.0	10.5
12	10.0	5.0			13.0	11.5	18.5	12.5	18.5	16.0	13.0	10.0
13	7.5	5.5			14.0	10.5	19.5	13.5	16.5	15.0	11.5	10.5
14	8.0	6.0			13.0	10.5	19.5	14.5	18.0	14.0	13.0	10.5
15	7.5	6.0			12.5	10.0	18.0	15.5	16.5	15.0	12.5	11.0
16	6.5	5.5			15.0	9.5	15.5	14.5	15.0	14.0	12.0	9.5
17	6.5	5.0			16.5	10.0	18.5	12.5	15.0	13.0	10.5	9.5
18	---	---			13.5	11.5	19.0	14.0	17.0	13.0	10.0	9.5
19	---	---			17.0	11.5	19.5	14.0	16.5	14.0	11.5	9.0
20	---	---			17.5	12.5	19.5	14.5	15.5	14.5	11.5	8.5
21	---	---			17.5	13.5	20.0	14.0	14.5	13.5	12.0	9.5
22	---	---			18.0	12.5	20.0	15.0	14.5	13.0	11.5	9.5
23	---	---			14.5	13.0	21.0	16.0	14.0	12.5	12.5	9.5
24	---	---			13.5	12.0	21.0	16.0	14.0	13.0	13.0	10.0
25	---	---			13.0	11.5	21.0	16.0	15.0	12.0	13.0	11.0
26	---	---			16.5	11.5	20.5	17.5	15.5	11.5	13.5	10.5
27	---	---			18.0	11.5	20.0	15.5	16.0	12.0	13.5	12.0
28	---	---			16.0	12.5	20.0	15.0	16.5	12.5	13.0	10.5
29	---	---			16.0	13.0	20.5	15.5	17.5	13.5	13.0	10.0
30	---	---			17.5	13.0	20.5	16.0	17.0	15.0	12.5	11.0
31	---	---			---	---	20.0	15.0	15.5	14.5	---	---
MONTH	11.0	5.0			18.0	9.5	21.0	12.0	22.0	11.5	17.0	8.5

14162100 BLUE RIVER LAKE NEAR BLUE RIVER, OR

LOCATION.--Lat 44°10'20", long 122°19'40", in SE¼SE¼ sec.16, T.16 S., R.4 E., Lane County, Hydrologic Unit 17090004, in intake tower near left end of Blue River Dam on Blue River, 1.4 mi (2.3 km) north of town of Blue River, and at mile 1.7 (2.7 km).

DRAINAGE AREA.--87.3 mi² (226.1 km²).

PERIOD OF RECORD.--October 1968 to current year. Prior to October 1971, published as Blue River Reservoir near Blue River.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with concrete gate and spillway section, completed in 1968 by Corps of Engineers; storage began October 1968. Total capacity is 89,520 acre-ft (110 hm³) at elevation 1,357 ft (413.6 m), maximum pool, and usable capacity is 85,550 acre-ft (105 hm³) between elevations 1,180 ft (359.7 m), minimum flood control pool, and 1,357 ft (413.6 m), maximum pool. Reservoir used for flood control. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 85,680 acre-ft (106 hm³) June 12, 13, 1977, elevation, 1,353.02 ft (412.400 m); minimum observed since first filling in 1968, 305 acre-ft (376,000 m³) Dec. 7, 1973, elevation, 1,125.47 ft (343.043 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 84,740 acre-ft (104 hm³) June 10, elevation, 1,352.03 ft (412.099 m); minimum, 3,340 acre-ft (4.12 hm³) Nov. 15, elevation, 1,174.93 ft (358.119 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)

1,120	136	1,160	1,870	1,250	19,260
1,130	437	1,180	3,970	1,290	36,960
1,140	764	1,200	7,030	1,340	73,710
1,150	1,210	1,220	11,040	1,354	86,620

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1226.06	1205.71	1261.71	1180.55	1199.05	1271.04	1294.60	1328.93	1351.94	1351.60	1315.20	1275.08
2	1225.63	1210.31	1261.66	1180.74	1213.00	1272.00	1295.30	1329.82	1351.88	1351.37	1313.36	1274.16
3	1225.09	1205.20	1272.16	1182.36	1229.43	1273.00	1296.00	1330.63	1351.90	1351.10	1311.56	1273.24
4	1224.37	1199.21	1268.83	1184.08	1230.87	1273.80	1296.70	1331.39	1351.93	1350.82	1309.72	1272.33
5	1223.61	1195.49	1259.79	1184.93	1230.55	1274.60	1297.70	1332.03	1351.95	1350.70	1308.01	1271.54
6	1223.09	1192.84	1254.34	1186.26	1230.00	1275.40	1298.70	1332.59	1351.91	1350.77	1306.30	1270.77
7	1223.19	1189.30	1250.84	1181.11	1231.60	1276.30	1299.40	1333.10	1351.90	1350.40	1304.74	1269.90
8	1223.15	1184.39	1241.76	1180.60	1234.76	1277.40	1300.10	1333.61	1351.92	1349.65	1303.30	1269.30
9	1222.75	1180.62	1227.21	1180.67	1236.56	1278.40	1300.80	1334.09	1351.95	1349.10	1301.87	1268.98
10	1222.19	1179.92	1207.01	1180.00	1238.95	1279.40	1301.63	1334.56	1352.03	1348.52	1300.40	1269.90
11	1221.50	1180.18	1199.12	1180.00	1241.70	1280.30	1302.41	1335.63	1351.97	1347.77	1298.85	1271.08
12	1220.74	1179.88	1211.72	1180.28	1243.94	1281.20	1303.06	1336.75	1351.93	1346.55	1297.56	1271.28
13	1219.91	1179.00	1267.71	1180.83	1245.98	1282.10	1303.65	1337.87	1351.95	1344.93	1296.05	1271.13
14	1219.08	1178.90	1295.99	1180.52	1247.88	1283.00	1304.23	1339.09	1351.97	1343.40	1294.56	1271.78
15	1218.14	1178.11	1311.76	1179.71	1249.70	1283.40	1304.75	1340.90	1352.01	1341.86	1293.18	1270.31
16	1217.10	1180.35	1313.02	1180.00	1251.40	1284.40	1305.37	1342.62	1351.98	1340.38	1291.86	1269.58
17	1215.96	1180.06	1308.12	1181.33	1252.98	1285.20	1305.98	1343.95	1351.93	1338.95	1290.46	1269.00
18	1214.87	1179.82	1301.18	1180.90	1254.68	1286.00	1306.63	1344.00	1351.93	1337.83	1288.92	1268.58
19	1213.56	1180.34	1293.00	1180.20	1256.41	1286.60	1307.35	1345.83	1351.95	1336.84	1287.35	1268.08
20	1212.21	1180.13	1282.97	1179.62	1258.27	1287.30	1308.12	1346.56	1351.94	1335.65	1285.89	1267.47
21	1210.79	1180.10	1271.13	1181.70	1259.96	1288.00	1309.05	1347.16	1351.93	1334.29	1284.31	1266.78
22	1209.29	1179.45	1257.78	1182.89	1261.70	1288.60	1310.68	1347.73	1351.92	1332.75	1282.72	1266.05
23	1207.71	1182.60	1246.55	1181.02	1263.22	1289.40	1312.34	1348.21	1351.92	1331.06	1281.71	1265.28
24	1206.38	1215.50	1247.40	1180.26	1264.65	1290.20	1314.00	1348.68	1351.96	1329.36	1281.16	1264.43
25	1205.98	1268.30	1246.72	1179.32	1266.00	1291.00	1315.97	1349.13	1351.97	1327.65	1280.82	1263.59
26	1206.86	1286.75	1240.47	1179.26	1267.50	1291.60	1319.70	1349.53	1351.97	1325.93	1280.18	1262.70
27	1205.61	1287.57	1229.22	1180.15	1268.85	1292.20	1322.82	1350.04	1351.94	1324.28	1279.32	1261.78
28	1202.86	1281.45	1213.08	1180.12	1270.00	1292.70	1324.93	1350.61	1351.93	1322.40	1278.55	1260.83
29	1200.45	1278.70	1197.73	1179.88	---	1293.30	1326.55	1351.08	1351.96	1320.64	1277.72	1259.92
30	1203.97	1272.90	1187.69	1184.32	---	1293.80	1327.86	1351.48	1351.88	1318.80	1276.83	1258.96
31	1206.40	---	1182.54	1191.00	---	1294.20	---	1351.83	---	1317.03	1275.97	---
MEAN	1215.44	1205.77	1251.94	1181.44	1246.41	1283.74	1307.21	1341.27	1351.94	1338.79	1292.85	1268.13
MAX	1226.06	1287.57	1313.02	1191.00	1270.00	1294.20	1327.86	1351.83	1352.03	1351.60	1315.20	1275.08
MIN	1200.45	1178.11	1182.54	1179.26	1199.05	1271.04	1294.60	1328.93	1351.88	1317.03	1275.97	1258.96
(†)	8,200	28,120	4,320	5,550	26,820	39,450	63,430	84,550	84,600	54,990	29,560	22,380
(‡)	-4,310	+19,920	-23,800	+1,230	+21,270	+12,630	+24,000	+21,120	+50	-29,610	-25,430	-7,180

CAL YR 1977 MEAN 1266.88 MAX 1353.02 MIN 1176.80 AC-FT‡ +330
WTR YR 1978 MEAN 1273.86 MAX 1352.03 MIN 1178.11 AC-FT‡ +9,870

† Contents, in acre-feet, at 2400, on last day of month.
‡ Change in contents, in acre-feet.

14162200 BLUE RIVER AT BLUE RIVER, OR

LOCATION.--Lat 44°09'45", long 122°19'55", in NW¼SE¼ sec.21, T.16 S., R.4 E., Lane County, Hydrologic Unit 17090004, on right bank 0.3 mi (0.5 km) upstream from Simmonds Creek, 0.7 mi (1.1 km) north of town of Blue River, 0.8 mi (1.3 km) downstream from Blue River Dam, and at mile 0.9 (1.4 km).

DRAINAGE AREA.--87.7 mi^2 (227.1 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,056.53 ft (322.030 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Aug. 25, 1966, nonrecording gage at datum 0.80 ft (0.244 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since October 1968 by Blue River Lake (see station 14162100). No diversion above station. Discharge not adjusted for storage or release from Blue River Lake as losses from reservoir at times exceed natural flow.

AVERAGE DISCHARGE.--12 years, 479 ft^3/s (13.57 m^3/s), 347,000 acre-ft/yr (428 hm^3/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,270 ft^3/s (206 m^3/s) Feb. 23, 1968, gage height, 8.93 ft (2.722 m); minimum, 0.80 ft^3/s (0.023 m^3/s) Oct. 8, 10, 11, 1968; minimum daily, 3.7 ft^3/s (0.10 m^3/s) Oct. 8, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,520 ft^3/s (99.7 m^3/s) Nov. 28, gage height, 7.90 ft (2.408 m); minimum, 12 ft^3/s (0.34 m^3/s) Feb. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	707	3280	612	38	49	46	56	145	227	669	254
2	157	845	2140	486	180	49	47	56	202	227	669	254
3	157	926	1040	570	801	49	47	56	163	227	658	254
4	168	764	2420	812	1190	49	37	56	147	224	622	254
5	155	644	2820	914	1010	49	25	56	160	117	587	251
6	155	630	2800	1110	896	49	25	55	155	61	587	251
7	157	608	2810	1170	654	48	25	55	135	231	540	251
8	155	586	2790	845	525	48	24	28	126	376	489	251
9	155	444	2770	801	529	48	24	39	126	332	485	247
10	153	286	2710	851	286	48	24	62	174	324	485	251
11	153	223	1890	723	101	49	24	62	212	384	481	251
12	151	218	1170	785	103	49	24	62	158	573	476	251
13	151	261	289	753	69	49	24	62	130	664	476	251
14	151	888	39	759	48	50	25	62	133	685	472	251
15	149	1970	253	693	45	50	25	64	142	685	472	261
16	155	1260	2220	649	46	50	25	64	168	679	467	265
17	161	673	3260	723	50	50	25	64	147	617	463	265
18	159	518	3250	817	49	47	25	62	110	498	463	261
19	157	411	3230	817	48	46	27	62	114	454	458	261
20	164	344	3260	769	47	46	29	62	126	521	458	261
21	168	304	3270	780	47	46	28	62	119	573	472	261
22	166	997	3260	871	47	46	29	62	108	658	481	261
23	170	1220	2520	790	47	46	30	62	100	695	324	261
24	173	908	1880	612	47	46	28	62	100	690	265	261
25	173	49	1880	507	48	46	44	62	104	690	265	258
26	173	376	2110	486	48	46	56	62	128	685	261	258
27	233	1930	2320	474	48	46	56	64	114	685	261	258
28	310	3110	2290	422	49	46	56	64	94	679	261	258
29	307	2490	1720	404	---	46	56	64	90	679	258	254
30	313	2710	1290	205	---	46	56	64	137	674	258	254
31	489	---	881	41	---	46	---	64	---	674	258	---
TOTAL	5795	27300	67862	21251	7096	1478	1016	1837	4067	15488	13841	7680
MEAN	187	910	2189	686	253	47.7	33.9	59.3	136	500	446	256
MAX	489	3110	3280	1170	1190	50	56	64	212	695	669	265
MIN	149	49	39	41	38	46	24	28	90	61	258	247
AC-FT	11490	54150	134600	42150	14070	2930	2020	3640	8070	30720	27450	15230

CAL YR 1977 TOTAL 159647 MEAN 437 MAX 3280 MIN 10 AC-FT 316700
WTR YR 1978 TOTAL 174711 MEAN 479 MAX 3280 MIN 24 AC-FT 346500

14162200 BLUE RIVER AT BLUE RIVER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1966 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 26.0°C July 6, 1968; minimum, 0.0°C Jan. 5-9, 1974.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 19.0°C Sept. 7; minimum, 2.5°C Jan. 30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.0	13.5	10.0	9.5	7.5	7.0	5.0	3.5	5.5	3.0		
2	14.0	13.5	10.0	8.5	9.5	7.0	4.0	3.0	6.0	4.0		
3	14.0	13.5	9.0	8.0	9.5	7.0	4.0	3.0	6.0	4.5		
4	14.0	13.0	8.5	8.0	8.0	7.5	5.0	4.0	6.0	5.5		
5	14.0	13.5	8.0	7.5	8.0	7.5	5.5	4.5	6.5	6.0		
6	14.0	13.0	7.5	7.5	7.5	7.5	6.0	5.0	6.0	5.5		
7	14.0	13.0	7.5	7.5	7.5	7.0	6.0	4.5	6.0	6.0		
8	13.5	13.0	7.5	7.0	7.5	6.5	6.0	4.5	6.5	6.0		
9	13.5	12.5	8.0	6.0	7.0	5.5	6.0	6.0	6.0	6.0		
10	13.5	12.5	7.0	5.0	7.0	5.5	6.5	6.0	6.0	4.5		
11	13.0	12.5	6.5	5.5	6.5	6.0	6.5	6.0	6.0	4.0		
12	13.5	12.5	6.5	6.0	6.5	6.5	6.5	5.5	5.5	4.5		
13	13.0	13.0	7.0	6.5	12.5	6.5	6.5	6.0	---	---		
14	13.5	12.5	7.5	6.5	12.5	8.5	7.0	6.0	---	---		
15	13.5	13.0	8.0	7.5	8.5	3.0	6.5	6.5	---	---		
16	13.5	13.0	8.5	7.5	8.0	7.5	6.5	6.0	---	---		
17	14.0	13.0	7.5	6.5	8.0	7.0	6.5	6.0	---	---		
18	14.0	13.5	7.0	5.5	7.5	6.5	6.0	6.0	---	---		
19	14.0	13.5	6.0	4.5	7.0	6.5	6.5	5.5	---	---		
20	14.0	13.0	4.5	3.5	7.0	6.5	6.5	5.5	---	---		
21	14.0	13.5	3.5	3.0	6.5	6.5	6.5	6.5	---	---		
22	14.0	13.0	3.5	3.0	7.0	5.5	6.5	5.0	---	---		
23	13.5	13.0	6.0	4.5	6.5	5.5	6.0	4.5	---	---		
24	13.5	13.0	9.0	6.0	6.5	5.5	5.0	4.5	---	---		
25	13.5	13.0	9.5	8.0	6.0	5.5	5.0	4.5	---	---		
26	13.0	12.0	10.0	5.0	6.5	5.5	5.5	4.5	---	---		
27	12.5	11.5	7.5	6.5	6.5	5.5	6.0	4.5	---	---		
28	12.0	11.0	8.0	6.5	6.0	5.0	6.0	5.0	---	---		
29	12.0	11.5	8.0	6.5	6.0	5.0	6.0	5.5	---	---		
30	12.0	10.5	7.5	6.5	6.0	5.0	7.0	2.5	---	---		
31	10.5	9.5	---	---	5.5	4.5	7.5	4.0	---	---		
MONTH	14.0	9.5	10.0	3.0	12.5	3.0	7.5	2.5	6.5	3.0		

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	7.5	5.5	8.0	6.0	8.0	6.5	10.0	8.5	18.5	18.0
2	---	---	7.5	6.0	7.5	6.5	8.5	6.5	10.0	9.0	18.5	18.0
3	---	---	7.5	6.0	8.0	6.5	8.0	6.5	10.0	9.0	18.5	18.0
4	---	---	7.5	6.0	8.0	6.0	8.5	6.5	10.0	9.5	18.5	18.5
5	---	---	8.5	6.0	8.0	7.0	9.5	6.5	10.5	9.5	18.5	18.5
6	---	---	8.0	6.0	8.0	6.0	10.0	6.5	10.5	9.5	18.5	18.5
7	---	---	8.5	6.0	8.0	6.0	8.0	6.5	10.5	10.0	19.0	18.5
8	---	---	10.5	6.0	8.0	6.5	8.5	6.0	11.0	9.5	18.5	18.5
9	---	---	7.5	6.5	8.0	6.5	8.0	6.5	11.0	10.5	18.5	18.5
10	---	---	7.5	6.5	7.5	6.0	8.0	6.5	11.5	11.0	18.5	17.5
11	---	---	7.5	6.0	8.0	6.0	8.5	6.5	11.5	11.0	17.5	16.5
12	---	---	8.0	6.0	8.5	6.0	8.0	6.5	12.0	11.5	16.5	16.0
13	7.5	6.0	7.5	6.5	8.0	6.5	8.0	6.0	12.0	11.5	16.0	15.5
14	8.0	6.0	7.0	6.0	8.0	6.0	8.0	7.0	12.5	12.0	16.5	16.0
15	7.0	6.0	7.5	6.0	8.0	6.5	8.0	7.5	13.0	12.5	16.5	15.5
16	7.0	5.0	7.5	6.5	8.5	6.0	8.0	7.5	13.5	13.0	16.5	16.0
17	7.5	6.0	8.5	6.0	8.5	6.0	8.0	6.5	13.5	13.0	16.5	16.0
18	8.0	6.0	8.5	6.5	8.0	6.0	8.5	6.5	14.0	13.5	16.5	16.0
19	7.0	6.0	8.0	6.0	8.5	6.0	8.5	6.5	14.5	14.0	16.5	15.5
20	7.0	6.0	8.5	6.0	8.5	6.0	8.5	8.0	15.0	14.5	16.0	15.5
21	7.5	5.5	7.0	6.0	8.5	6.5	8.5	8.0	15.5	15.0	16.0	15.5
22	7.0	6.0	8.0	6.0	8.5	6.0	8.5	8.0	16.0	15.5	16.0	15.5
23	8.0	6.5	8.0	6.0	8.0	6.0	8.5	8.0	16.0	16.0	16.0	15.5
24	8.0	6.5	8.0	6.0	8.0	6.0	9.0	7.5	16.0	16.0	16.0	15.0
25	7.5	6.5	8.5	6.5	8.5	6.0	9.0	8.5	17.0	16.0	16.0	15.5
26	7.0	5.5	7.5	6.0	8.5	6.5	9.0	8.0	17.0	16.5	16.0	15.0
27	7.0	6.0	7.5	6.0	9.0	6.0	9.0	8.0	17.5	17.0	16.5	16.0
28	7.5	6.0	8.5	6.5	8.5	6.5	9.0	7.5	18.0	17.0	16.5	16.0
29	8.0	6.0	9.0	6.0	9.0	6.5	9.5	8.0	18.0	17.5	16.5	16.0
30	7.0	6.0	8.5	6.5	9.0	6.5	9.5	8.5	18.0	17.5	16.5	16.0
31	---	---	9.0	6.5	---	---	9.5	9.0	18.0	18.0	---	---
MONTH	8.0	5.0	10.5	5.5	9.0	6.0	10.0	6.0	18.0	8.5	19.0	15.0

14162500 MCKENZIE RIVER NEAR VIDA, OR

LOCATION.--Lat 44°07'30", long 122°28'10", in NE¼NE¼ sec.5, T.17 S., R.3 E., Lane County, Hydrologic Unit 17090004, on right bank 0.4 mi (0.6 km) downstream from Mason Creek, 5.4 mi (8.7 km) east of Vida, and at mile 47.7 (76.6 km).

DRAINAGE AREA.--930 mi^2 (2,409 km^2) at cableway 0.4 mi (0.6 km) downstream, where all discharge measurements are made.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1910 to March 1911 (published as "at Martins Rapids, near Vida"), September 1924 to current year. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 855.71 ft (260.820 m) National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). July 1, 1910, to Mar. 31, 1911, nonrecording gage at site 3 mi (5 km) downstream at different datum. Sept. 1, 1924, to Nov. 16, 1928, nonrecording gage at site 20 ft (6 m) upstream at datum 0.15 ft (0.046 m) lower. Nov. 17, 1928, to Sept. 23, 1968, water-stage recorder at present site on left bank at datum 0.15 ft (0.046 m) lower.

REMARKS.--Water-discharge records good. Flow regulated since 1963 by Smith River Reservoir (see station 14158795) and Cougar Lake see station 14159400), and since 1968 by Blue River Lake (see station 14162100). No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--54 years (water years 1925-78), 4,051 ft^3/s (114.7 m^3/s), 2,935,000 acre-ft/yr (3.62 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,400 ft^3/s (1,820 m^3/s) Dec. 28, 1945, gage height, 17.70 ft (5.395 m), site and datum then in use, from rating curve extended above 32,000 ft^3/s (906 m^3/s); minimum, 1,260 ft^3/s (35.7 m^3/s) Nov. 7, 1930, Sept. 17, Oct. 4, 8, 9, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1923 reached a stage of 17.2 ft (5.24 m), from floodmarks, discharge, 62,000 ft^3/s (1,760 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 23,200 ft^3/s (657 m^3/s) Nov. 25, gage height, 8.29 ft (2.527 m); minimum, 1,450 ft^3/s (41.1 m^3/s) Oct. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2670	4090	11500	5950	3350	2790	2430	3200	2600	2140	2450	2500
2	2550	5230	11900	5650	4030	2740	2450	3100	2600	2220	2430	2480
3	2450	4530	12000	5600	7650	2670	2470	2990	2540	2260	2420	2430
4	2430	4050	12200	5720	7120	2710	2450	2920	2550	2250	2380	2470
5	2430	3870	12400	5920	6450	2710	2450	2830	2520	2090	2350	2540
6	2480	3950	13000	6370	6200	2740	2470	2760	2470	1930	2350	2550
7	2650	3890	14400	6320	5800	2670	2450	2710	2420	2090	2300	2620
8	2640	3870	13100	5700	5800	2720	2400	2640	2380	2280	2180	2640
9	2520	3790	12600	5620	5520	2790	2330	2570	2380	2200	2090	2670
10	2470	3430	12200	5720	4810	2770	2330	2600	2570	2200	2040	3370
11	2470	3350	12000	5550	3810	2790	2330	3060	2600	2250	2020	3510
12	2020	3410	11500	5650	3610	2740	2330	3130	2470	2430	2060	3130
13	1590	3590	16900	5570	3470	2790	2330	3190	2430	2550	2180	2930
14	1640	4940	18400	5570	3370	2740	2310	3190	2400	2570	2140	2830
15	1990	8170	17800	5470	3280	2600	2260	3710	2480	2600	2140	2760
16	1730	7550	15500	5340	3190	2550	2260	3750	2430	2670	2310	2740
17	1590	6370	15300	5700	3130	2520	2260	3530	2370	2600	2400	2760
18	1710	5600	15100	5870	3110	2520	2640	3280	2280	2400	2330	2860
19	1700	4970	14300	5950	3080	2530	2990	3100	2250	2280	2310	2830
20	1670	4720	13500	5750	3060	2530	2990	3020	2250	2300	2310	2740
21	1680	4350	12900	5950	3040	2530	2620	2930	2230	2370	2350	2690
22	1800	6080	12500	6400	3010	2550	2600	2840	2200	2480	2430	2670
23	1860	7670	11700	5870	3020	2640	2950	2830	2180	2550	2420	2670
24	2170	9550	10800	5360	3010	2690	2810	2770	2200	2540	2570	2670
25	2620	15700	9640	5030	2900	2570	2830	2690	2230	2520	2880	2650
26	2520	15300	9340	4920	2970	2480	4880	2620	2180	2550	2620	2740
27	2710	11200	9400	4640	3020	2530	4610	2690	2150	2570	2550	2840
28	2740	12100	9070	4090	2950	2520	3910	2830	2100	2550	2540	2840
29	2770	11300	8320	4010	---	2500	3570	2720	2200	2540	2520	2810
30	3550	10400	7600	3650	---	2480	3310	2600	2140	2500	2500	2790
31	3870	---	6600	3260	---	2500	---	2520	---	2480	2500	---
TOTAL	71690	197020	383470	168170	113760	81610	83020	91320	70800	73960	73070	82730
MEAN	2313	6567	12370	5425	4063	2633	2767	2946	2360	2386	2357	2758
MAX	3870	15700	18400	6400	7650	2790	4880	3750	2600	2670	2880	3510
MIN	1590	3350	6600	3260	2900	2480	2260	2520	2100	1930	2020	2430
AC-FT	142200	390800	760600	333600	225600	161900	164700	181100	140400	146700	144900	164100

CAL YR 1977 TOTAL 1317860 MEAN 3611 MAX 18400 MIN 1330 AC-FT 2614000
WTR YR 1978 TOTAL 1490620 MEAN 4084 MAX 18400 MIN 1590 AC-FT 2957000

14162500 MCKENZIE RIVER NEAR VIDA, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: November 1976 to current year.
WATER TEMPERATURES: June 1961 to current year.

INSTRUMENTATION.—Graphic temperature recorder since June 1961. Dual conductivity-temperature recorder since November 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum recorded, 69 micromhos Mar. 26, 1978; minimum recorded, 24 micromhos Nov. 25, 1977.
WATER TEMPERATURES: Maximum, 16.0°C July 6, 7, 28, 1968; minimum, 1.0°C Feb. 5, 6, 1976.

EXTREMES FOR CURRENT YEAR.—
SPECIFIC CONDUCTANCE: Maximum recorded, 69 micromhos Mar. 26; minimum recorded, 24 micromhos Nov. 25.
WATER TEMPERATURES: Maximum, 15.0°C July 6-8, Aug. 6-9, 11; minimum, 4.5°C Mar. 15.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)
JAN 05...	1500	6020	5.5	7.2	12.2	69	18	3.5
MAY 25...	1100	2700	8.0	6.5	10.4	52	20	4.1
SEP 27...	1530	2840	12.3	7.5	10.8	61	19	4.5

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)
JAN 05...	1.4	2.5	.6	16	2.0	1.0	.1	.08	.39
MAY 25...	1.7	3.7	.8	23	1.0	1.4	.1	.01	.35
SEP 27...	1.7	3.8	1.0	23	2.9	1.6	.0	.00	.25

DATE	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	TUR-BID-ITY (JTU)
JAN 05...	.04	.9	15	0	38	39	618	5
MAY 25...	.01	.4	17	0	38	47	277	1
SEP 27...	.04	1.0	18	0	50	48	383	0

DATE	IRON, DIS-SOLVED (UG/L AS FE)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	ARSENIC DIS-SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM DIS-SOLVED (UG/L AS CD)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)
JAN 05...	20	390	0	10	0	0	0	1	0	0	0
MAY 25...	0	20	10	10	0	0	1	1	0	0	0
SEP 27...	20	220	0	0	0	0	2	2	0	0	0

DATE	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SELE-NIUM, TOTAL (UG/L AS SE)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)
JAN 05...	0	1	29	0	5	20	30	0	0	.0	.1
MAY 25...	1	2	8	4	8	5	20	0	0	.1	.1
SEP 27...	0	5	11	--	--	20	50	0	0	.0	.1

14162500 MCKENZIE RIVER NEAR VIDA, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	49	36	38	---	---			52	57	52	57
2	51	46	35	40	---	---			52	58	50	58
3	52	47	34	41	---	---			53	---	53	58
4	52	48	34	40	---	---			55	57	52	56
5	52	48	33	38	---	---			54	58	54	52
6	51	48	33	---	---	---			55	59	55	55
7	51	48	33	---	---	---			54	57	53	55
8	51	49	34	---	50	---			58	56	55	56
9	51	49	33	---	50	61			---	57	56	56
10	52	51	34	---	51	98			---	57	56	55
11	52	51	34	---	53	61			---	56	56	55
12	53	51	34	---	54	58			---	55	---	56
13	56	51	30	---	55	60			---	54	---	56
14	56	47	29	---	55	61			---	54	---	57
15	54	41	30	---	---	61			---	56	---	57
16	56	42	32	---	---	61			---	58	---	58
17	57	45	32	---	---	62			---	59	---	58
18	56	47	33	---	---	62			---	61	---	58
19	56	48	32	---	---	62			---	60	---	58
20	57	49	32	---	---	62			---	59	55	58
21	57	49	32	---	---	63			---	59	53	59
22	56	45	32	---	---	62			---	60	---	59
23	56	43	32	---	---	63			---	58	47	57
24	55	40	33	---	---	65			---	58	47	57
25	54	32	33	---	---	65			---	57	48	57
26	54	46	33	---	---	66			---	57	49	58
27	54	37	34	---	---	---			56	56	50	58
28	53	35	34	---	---	---			57	57	51	57
29	53	35	36	---	---	---			55	57	52	57
30	51	39	36	---	---	---			56	57	54	58
31	50	---	38	---	---	---			---	58	55	---
MEAN	54	45	33	39	53	64			55	57	52	57

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.0	10.0	10.0	9.5	8.0	7.5	5.5	5.0	6.0	6.0	5.5	5.0
2	12.0	10.0	10.0	8.5	8.0	7.5	5.5	5.0	6.0	6.0	5.5	5.0
3	12.0	10.0	9.0	8.0	8.0	7.5	6.0	5.5	6.0	6.0	5.5	5.5
4	12.0	9.5	8.5	8.0	8.0	7.5	6.0	5.5	6.0	6.0	5.5	5.0
5	12.0	10.5	8.5	8.5	7.5	7.5	6.5	6.0	6.0	6.0	5.5	5.5
6	11.0	10.0	9.5	8.5	8.0	7.5	5.5	5.5	6.0	6.0	6.0	5.5
7	11.5	10.5	9.0	8.0	7.5	7.0	5.5	5.5	7.0	6.0	6.0	6.0
8	12.0	9.5	8.5	7.5	7.0	6.5	5.5	5.5	6.5	6.0	6.0	6.0
9	12.0	10.0	8.5	7.5	7.0	6.5	5.5	5.5	7.0	6.5	7.0	6.0
10	11.5	9.5	8.5	7.5	7.0	7.0	6.0	5.5	6.5	6.0	6.5	5.5
11	12.0	9.5	9.0	8.0	7.5	7.0	6.0	6.0	6.5	5.0	6.0	5.5
12	11.0	10.0	9.0	8.5	7.5	7.0	6.0	6.0	5.5	5.0	6.0	5.5
13	11.0	9.5	9.0	8.5	8.0	7.5	6.0	6.0	6.5	5.0	5.5	5.5
14	11.0	9.5	8.5	8.0	8.0	8.0	6.0	6.0	6.5	5.5	6.0	5.0
15	12.0	9.5	9.0	8.5	8.0	6.5	6.0	6.0	6.0	5.5	5.5	4.5
16	11.5	10.0	8.5	8.5	7.0	6.5	6.0	6.0	6.0	5.5	6.5	5.0
17	11.0	9.0	8.5	8.0	7.0	7.0	6.0	5.5	5.0	5.0	8.0	5.5
18	11.0	9.5	8.0	7.0	7.0	6.5	5.5	5.5	5.5	5.0	8.0	6.0
19	11.0	10.0	7.0	6.5	7.0	6.5	5.5	5.5	5.5	5.5	8.5	6.5
20	10.5	9.0	6.5	5.5	6.5	6.5	6.0	5.5	6.0	5.5	8.0	6.0
21	11.0	9.5	6.5	6.0	7.0	6.5	6.0	6.0	6.0	6.0	8.0	6.5
22	10.5	9.0	6.5	6.0	7.0	6.5	6.0	6.0	6.0	5.5	8.5	6.5
23	11.0	9.5	7.0	6.5	6.5	6.5	6.0	5.5	6.0	6.0	8.5	8.0
24	11.5	10.0	7.5	7.0	7.0	6.5	5.5	5.5	6.0	6.0	7.0	6.5
25	11.0	10.5	8.0	7.0	7.0	6.5	5.5	5.5	6.0	6.0	9.0	6.5
26	11.0	10.0	7.5	7.0	6.5	6.0	5.5	5.5	6.0	6.0	9.5	7.0
27	10.5	9.5	7.5	7.0	6.5	6.0	5.5	5.5	6.0	5.5	9.5	8.0
28	10.5	9.5	7.5	7.5	6.5	6.5	6.0	5.5	6.0	5.0	9.0	7.0
29	10.5	10.0	8.0	7.5	6.5	6.5	6.0	6.0	---	---	9.0	8.0
30	10.0	9.5	8.0	7.5	6.5	6.0	6.0	6.0	---	---	8.5	8.5
31	10.0	9.0	---	---	6.0	5.5	6.0	6.0	---	---	8.5	8.0
MONTH	12.0	9.0	10.0	5.5	8.0	5.5	6.5	5.0	7.0	5.0	9.5	4.5

14162500 MCKENZIE RIVER NEAR VIDA, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	8.0	---	---	13.0	8.5	12.5	10.0	14.0	9.5	13.5	10.0
2	7.0	6.5	---	---	13.5	8.5	11.5	9.5	14.5	10.0	14.0	10.5
3	8.0	6.5	---	---	13.5	8.5	10.5	9.5	14.5	10.0	12.0	10.5
4	7.0	6.5	---	---	14.0	9.0	13.5	9.0	14.5	10.5	11.0	10.0
5	6.5	6.0	---	---	14.0	9.0	14.5	9.5	14.5	10.0	11.0	10.0
6	8.0	6.0	---	---	13.5	9.5	15.0	10.0	15.0	10.0	11.5	10.0
7	8.0	6.0	---	---	14.0	9.0	15.0	10.5	15.0	10.5	11.5	10.0
8	9.0	6.5	---	---	14.0	9.5	15.0	10.0	15.0	11.0	10.5	9.5
9	10.0	6.0	---	---	13.5	10.0	13.5	9.5	15.0	10.5	11.0	10.0
10	10.5	7.0	---	---	10.5	9.0	13.5	9.5	14.5	10.5	11.0	10.0
11	10.0	8.0	---	---	13.5	8.5	13.5	9.0	15.0	11.0	11.5	10.0
12	9.5	6.5	---	---	12.0	9.0	13.5	9.0	13.0	11.0	12.0	9.0
13	9.5	7.0	---	---	11.5	9.0	14.0	9.5	13.0	10.5	11.0	9.5
14	8.0	7.0	---	---	13.5	9.0	14.0	9.5	14.5	10.0	12.5	9.5
15	8.0	7.0	---	---	12.5	8.5	12.5	10.0	12.5	10.5	12.0	10.0
16	7.0	6.5	---	---	13.0	8.5	11.5	9.5	12.0	10.5	11.5	9.0
17	7.0	6.0	---	---	14.0	8.5	13.5	9.5	12.0	10.0	10.5	9.0
18	---	---	---	---	13.0	9.5	14.5	9.5	13.5	9.5	10.5	9.0
19	---	---	---	---	14.5	9.5	14.5	9.5	12.5	10.5	12.0	9.0
20	---	---	---	---	14.5	9.5	14.0	10.0	12.0	10.5	11.5	9.0
21	---	---	---	---	13.5	10.0	14.0	9.5	12.0	10.5	11.0	9.5
22	---	---	---	---	14.5	9.5	13.5	9.5	12.0	10.5	11.0	9.5
23	---	---	---	---	12.5	9.5	14.5	10.0	11.5	10.5	12.0	9.5
24	---	---	---	---	11.5	9.5	14.5	10.0	11.0	10.0	12.0	9.5
25	---	---	---	---	14.0	9.0	14.0	10.0	12.5	10.0	11.5	10.0
26	---	---	11.5	---	14.5	9.0	13.0	10.5	13.0	9.5	12.5	10.0
27	---	---	12.0	8.5	14.5	9.0	14.0	9.5	13.5	9.5	12.5	10.5
28	---	---	13.0	9.0	13.0	9.5	14.0	9.5	13.0	10.0	12.5	10.0
29	---	---	13.0	9.0	13.0	10.0	14.0	9.5	14.0	10.0	12.5	10.0
30	---	---	13.0	9.5	14.0	10.0	14.5	10.0	12.0	10.5	12.0	10.5
31	---	---	13.0	9.5	---	---	14.0	9.5	12.0	10.5	---	---
MONTH	10.5	6.0	13.0	8.5	14.5	8.5	15.0	9.0	15.0	9.5	14.0	9.0

14163000 GATE CREEK AT VIDA, OR

LOCATION.--Lat 44°08'45", long 122°34'15", in SW¼ sec.28, T.16 S., R.2 E., Lane County, Hydrologic Unit 17090004, on right bank 300 ft (91 m) downstream from bridge on State Highway 126, at Vida, and at mile 0.2 (0.3 km).

DRAINAGE AREA.--47.6 mi^2 (123.3 km^2).

PERIOD OF RECORD.--June 1951 to September 1957; annual maximums, water years 1958-65; August 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 764.56 ft (233.038 m) National Geodetic Vertical Datum of 1929. June 11, 1951, to Sept. 30, 1957, water-stage recorder, and Oct. 1, 1957, to Aug. 1, 1966, crest-stage gage at same site and datum.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--18 years (water years 1952-57, 1967-78), 220 ft^3/s (6.230 m^3/s), 62.76 in/yr (1,594 mm/yr), 159,400 acre-ft/yr (197 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,140 ft^3/s (202 m^3/s) Dec. 22, 1964, gage height, 12.18 ft (3.712 m), from slope-area measurement of peak flow; minimum, 12 ft^3/s (0.34 m^3/s) Nov. 26, 27, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft^3/s (51.0 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	1930	*3,230	91.5	*8.28	2.524	Dec. 13	1800	2,640	74.8	7.53	2.295

Minimum, 22 ft^3/s (0.62 m^3/s) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	204	426	270	260	127	83	203	100	54	29	30
2	43	315	890	245	521	122	124	182	95	60	28	28
3	38	180	1180	263	1080	119	145	165	90	58	29	27
4	34	132	695	275	586	120	135	157	86	58	28	32
5	31	157	502	409	416	117	161	149	82	55	27	55
6	42	195	633	533	346	114	176	137	78	52	27	56
7	70	165	840	430	325	114	150	127	76	49	26	66
8	60	139	582	367	334	127	132	120	74	47	25	77
9	45	117	433	328	291	127	122	120	77	46	24	92
10	39	101	355	297	260	120	116	120	101	47	23	172
11	35	91	465	275	234	119	109	198	96	46	23	171
12	31	84	704	294	216	122	100	218	81	44	27	122
13	30	118	1920	294	196	130	97	188	79	43	35	90
14	29	315	1880	283	186	132	97	220	78	42	30	76
15	27	658	1770	263	192	124	95	352	82	42	43	64
16	25	406	1260	278	184	116	111	300	76	57	60	57
17	24	250	1170	361	184	113	125	243	71	55	58	57
18	24	199	821	406	182	106	117	205	68	46	37	68
19	23	161	582	383	172	101	117	180	68	43	32	64
20	23	139	447	349	165	96	125	161	66	40	36	56
21	23	125	367	403	154	95	174	149	64	38	43	52
22	23	534	319	514	147	90	380	138	61	36	53	47
23	36	708	352	430	140	119	409	132	61	34	54	45
24	37	1100	788	352	135	113	283	128	65	34	58	43
25	85	2130	659	305	130	101	255	125	69	33	86	41
26	135	1480	465	278	150	96	472	122	64	33	53	39
27	81	816	364	248	140	92	426	142	59	33	41	38
28	62	611	305	231	133	89	325	143	56	33	35	36
29	58	722	300	213	---	86	270	125	56	32	33	35
30	157	533	343	198	---	86	234	114	55	30	31	34
31	245	---	311	203	---	83	---	107	---	29	31	---
TOTAL	1667	12885	22128	9978	7459	3416	5665	5170	2234	1349	1165	1870
MEAN	53.8	430	714	322	266	110	189	167	74.5	43.5	37.6	62.3
MAX	245	2130	1920	533	1080	132	472	352	101	60	86	172
MIN	23	84	300	198	130	83	83	107	55	29	23	27
CFSM	1.13	9.03	15.0	6.77	5.59	2.31	3.97	3.51	1.57	.91	.79	1.31
IN.	1.30	10.07	17.29	7.80	5.83	2.67	4.43	4.04	1.75	1.05	.91	1.46
AC-FT	3310	25560	43890	19790	14790	6780	11240	10250	4430	2680	2310	3710

CAL YR 1977 TOTAL 67021 MEAN 184 MAX 2130 MIN 17 CFSM 3.87 IN 52.38 AC-FT 132900
WTR YR 1978 TOTAL 74986 MEAN 205 MAX 2130 MIN 23 CFSM 4.31 IN 58.60 AC-FT 148700

14165000 MOHAWK RIVER NEAR SPRINGFIELD, OR

LOCATION.--Lat 44°05'34", long 122°57'20", in SE¼NW¼ sec.17, T.17 S., R.2 W., Lane County, Hydrologic Unit 17090004, on left bank 50 ft (15 m) downstream from bridge, 1.3 mi (2.1 km) northeast of Springfield, and at mile 1.59 (2.56 km).

DRAINAGE AREA.--177 mi^2 (458 km^2).

PERIOD OF RECORD.--September 1935 to September 1952, October 1963 to current year. Prior to October 1935 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1248: 1939. WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 442.47 ft (134.865 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1935, to Sept. 30, 1952, nonrecording gage at same site and datum.

REMARKS.--Records good. Slight regulation at low flows by log ponds upstream. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--32 years, 538 ft^3/s (15.24 m^3/s), 41.28 in/yr (1,049 mm/yr), 389,800 acre-ft/yr (481 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft^3/s (368 m^3/s) Dec. 22, 1964, gage height, 22.60 ft (6.888 m); minimum, 8.2 ft^3/s (0.23 m^3/s) Sept. 9, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached a stage of 22.9 ft (6.98 m), from floodmark, probably affected by backwater from McKenzie River, discharge, 9,200 ft^3/s (261 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft^3/s (99.1 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2400	6,970	197	15.73	4.795	Dec. 15	1230	*7,400	210	*16.27	4.959

Minimum, 23 ft^3/s (0.65 m^3/s) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	181	1330	884	735	365	214	563	241	100	34	47
2	52	236	1480	815	1160	351	329	497	227	152	33	43
3	47	189	2380	862	2230	339	360	449	216	140	32	40
4	43	149	1920	837	1660	341	322	419	202	124	30	45
5	39	184	1700	1400	1310	332	365	400	191	112	31	75
6	43	280	1660	2570	1150	314	387	363	179	98	30	96
7	75	234	2230	1830	1090	301	356	334	170	92	30	103
8	66	197	1890	1500	1080	348	322	314	168	86	28	88
9	53	168	1600	1300	910	339	297	311	168	88	27	105
10	47	145	1460	1160	913	322	278	327	211	84	24	221
11	44	126	1890	1030	809	317	262	385	214	78	24	166
12	41	124	2330	1090	752	324	248	407	177	77	28	130
13	40	161	3510	1030	688	319	241	402	211	73	52	105
14	38	241	5680	1000	631	309	255	563	191	66	49	115
15	38	677	6830	958	702	297	262	868	186	65	48	98
16	38	699	5000	994	650	284	280	782	168	88	90	90
17	36	429	3800	1450	626	278	327	650	154	88	98	84
18	35	339	2600	1520	589	269	317	560	145	71	60	110
19	35	273	2000	1370	546	264	311	489	149	66	49	96
20	35	230	1600	1230	516	258	358	439	135	62	52	80
21	35	205	1200	1230	484	248	459	400	135	56	78	75
22	35	929	1400	1430	461	239	735	377	135	52	73	70
23	39	1320	1490	1270	441	304	884	358	128	49	68	68
24	56	1630	2020	1110	424	311	691	344	130	47	68	63
25	94	4010	1780	997	405	271	606	339	133	44	130	62
26	164	5090	1460	913	444	255	1020	322	128	43	78	60
27	112	2540	1280	806	417	246	984	353	115	43	60	59
28	82	2010	1120	749	385	230	825	332	103	44	52	59
29	73	1840	1060	685	---	227	702	294	100	44	47	57
30	133	1430	1150	621	---	225	621	273	105	40	44	57
31	205	---	1000	626	---	218	---	258	---	36	45	---
TOTAL	1935	26266	67850	35267	22308	9045	13618	13172	4915	2308	1592	2567
MEAN	62.4	876	2189	1138	797	292	454	425	164	74.5	51.4	85.6
MAX	205	5090	6830	2570	2230	365	1020	868	241	152	130	221
MIN	35	124	1000	621	385	218	214	258	100	36	24	40
CFSM	.35	4.95	12.4	6.43	4.50	1.65	2.57	2.40	.93	.42	.29	.48
IN.	.41	5.52	14.26	7.41	4.69	1.90	2.86	2.77	1.03	.49	.33	.54
AC-FT	3840	52100	134600	69950	44250	17940	27010	26130	9750	4580	3160	5090

CAL YR 1977 TOTAL 151609 MEAN 415 MAX 6830 MIN 16 CFSM 2.35 IN 31.86 AC-FT 300700
WTR YR 1978 TOTAL 200843 MEAN 550 MAX 6830 MIN 24 CFSM 3.11 IN 42.21 AC-FT 398400

14166000 WILLAMETTE RIVER AT HARRISBURG, OR

LOCATION.--Lat 44°16'1[illegible]", long 123°10'21", in NW¼NE¼ sec.16, T.15 S., R.4 W., Linn County, Hydrologic Unit 17090003, on right bank 75 ft (23 m) north of intersection of First Street and Kesling Street in Harrisburg and at mile 161.0 (259.0 km).

DRAINAGE AREA.--3,420 mi^2 (8,860 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1944 to current year. Gage-height records collected at same site in 1927-28, 1931, 1934, are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 288.39 ft (87.901 m) National Geodetic Vertical Datum of 1929. Oct. 1 to Nov. 14, 1944, nonrecording gage at bridge 1,110 ft (338 m) upstream at different datum. Nov. 15, 1944, to Aug. 15, 1973, at site 1,100 ft (335 m) upstream at datum 2.00 ft (0.610 m) higher.

REMARKS.--Water-discharge records good. Flow regulated by 8 reservoirs above station (see elsewhere in this report). Many small diversions above station for irrigation.

AVERAGE DISCHARGE.--34 years, 12,410 ft^3/s (351.5 m^3/s), 8,991,000 acre-ft/yr (11.1 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft^3/s (5,950 m^3/s) Dec. 29, 1945, gage height, 19.69 ft (6.002 m), from rating curve extended above 115,000 ft^3/s (3,260 m^3/s); minimum, 1,990 ft^3/s (56.4 m^3/s) Oct. 30, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood stage of 20.5 ft (6.25 m) was reached in December 1861, and 20.1 ft (6.13 m) in February 1890 (information from Corps of Engineers). Flood of Jan. 1, 1943, reached a stage of 19.1 ft (5.82 m) from National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 62,700 ft^3/s (1,780 m^3/s) Dec. 15, gage height, 12.60 ft (3.840 m); minimum, 3,330 ft^3/s (94.3 m^3/s) July 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7800	10100	40800	26900	8720	6480	5230	7750	5090	3830	4370	6050
2	7150	11200	42000	24200	10100	6240	5490	7150	5070	3870	4350	5830
3	6910	11700	36700	23900	23000	6180	6050	6840	4890	4060	4410	5640
4	6460	11000	41700	23600	26700	6220	5810	6460	4730	4020	4410	5880
5	6750	11500	43200	25600	23400	6240	5960	6280	4630	3930	4540	6200
6	7580	10100	41000	32400	19900	6240	6500	6030	4560	3590	4560	6590
7	8150	9920	44800	29000	18200	6130	6220	5730	4480	3430	4600	7310
8	8200	8590	42000	25400	18800	6220	5860	5520	4370	3630	4540	7800
9	8070	8340	41200	23600	18300	6330	5520	5490	4350	3730	4370	8020
10	7920	6960	39100	21500	17600	6240	5350	5490	4690	3650	4710	9070
11	8020	6960	38800	19300	15100	6200	5230	5680	5180	3570	5230	10300
12	8020	7510	39700	18600	13700	6260	5140	6570	4870	3670	5330	11900
13	7550	8370	40800	18500	12900	6220	5090	6350	4890	3790	5590	11500
14	7260	9860	48100	18200	9710	6310	5170	6630	4800	3750	5540	11400
15	7260	16000	57900	18100	9200	6070	5270	8530	4820	3810	5320	11200
16	7190	21900	52300	18200	8770	5900	5300	9980	4760	4110	5440	11000
17	6570	18100	50300	21000	8450	5710	5470	9440	4630	4230	5610	9950
18	7050	16300	48900	23100	8510	5590	5350	8510	4480	4020	5320	9680
19	6860	14800	51400	23300	8290	5540	5540	7680	4370	3730	5220	8800
20	6440	13300	49500	21700	8050	5490	5370	7150	4390	3590	5270	8560
21	5680	12600	46800	20100	7800	5440	5590	6460	4410	3570	5400	9530
22	5350	14500	46100	23600	7900	5400	6790	6180	4440	3610	5540	9620
23	5200	31200	44800	23300	7920	5780	9260	5920	4310	3750	5590	9410
24	5270	34100	45000	20900	7780	6280	8200	5780	4270	3750	5610	9230
25	6110	41000	45000	18400	7310	5940	7360	5810	4350	3810	6180	9170
26	6930	49600	41400	17200	7220	5640	10200	5490	4290	3890	6030	9050
27	6750	32500	38800	16100	7360	5420	12800	5710	4250	4210	5680	9260
28	7220	39400	36700	14000	6930	5330	10500	5940	4170	4390	5540	9320
29	7240	42600	33900	12100	---	5270	9230	5640	4150	4500	5400	9290
30	7730	39600	33100	11100	---	5250	8290	5420	4170	4480	5440	8920
31	8820	---	30500	9230	---	5250	---	5230	---	4410	5560	---
TOTAL	219510	569610	1332300	642130	347620	182810	199140	202840	136860	120380	160700	265480
MEAN	7081	18990	42980	20710	12420	5897	6638	6543	4562	3883	5184	8849
MAX	8820	49600	57900	32400	26700	6480	12800	9980	5180	4500	6180	11900
MIN	5200	6960	30500	9230	6930	5250	5090	5230	4150	3430	4350	5640
AC-FT	435400	1130000	2643000	1274000	689500	362600	395000	402300	271500	238800	318700	526600

CAL YR 1977 TOTAL 3477200 MEAN 9527 MAX 57900 MIN 2340 AC-FT 6897000
WTR YR 1978 TOTAL 4379380 MEAN 12000 MAX 57900 MIN 3430 AC-FT 8686000

14166000 WILLAMETTE RIVER AT HARRISBURG, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 24.0°C Aug. 12, 1973; minimum, 0.0°C Jan. 8, 9, 1973.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 21.5°C July 25; minimum recorded, 5.5°C Jan. 1-3.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.0	13.5	12.5	11.5	9.5	9.0	6.5	5.5	7.5	7.5	8.5	6.5
2	14.0	13.0	12.5	11.5	9.5	9.5	5.5	5.5	7.5	7.5	---	---
3	14.0	13.0	11.5	10.0	9.5	9.5	6.5	5.5	8.5	7.5	---	---
4	14.0	13.0	10.0	9.5	9.5	9.0	7.0	6.5	8.5	8.5	---	---
5	14.5	13.5	11.0	10.0	9.0	8.5	7.0	7.0	8.5	8.5	---	---
6	14.5	13.5	11.0	10.0	9.0	9.0	7.5	7.0	8.5	8.0	---	---
7	14.5	13.5	11.0	10.5	9.0	8.5	7.5	7.0	8.5	8.0	---	---
8	14.0	13.5	10.5	9.0	8.0	7.5	8.0	7.0	8.0	7.5	---	---
9	14.5	13.5	9.0	8.5	8.0	7.5	8.0	7.5	8.0	7.5	---	---
10	14.5	13.0	9.5	8.5	8.5	8.0	8.0	7.5	7.5	6.5	---	---
11	15.0	13.5	9.5	9.5	8.5	8.5	8.0	7.5	7.0	6.0	---	---
12	15.0	13.5	10.0	9.0	8.5	8.5	7.5	7.0	6.5	6.0	---	---
13	15.5	14.5	10.5	10.0	9.5	8.5	7.5	7.5	7.0	6.0	---	---
14	15.0	14.5	10.5	10.5	10.0	9.5	7.5	7.5	7.0	6.5	---	---
15	15.5	14.5	10.5	10.0	10.0	8.5	8.0	7.5	7.5	6.5	---	---
16	15.0	14.0	10.0	10.0	8.5	8.0	8.0	7.5	7.0	6.5	---	---
17	14.5	14.0	10.0	9.0	8.0	7.5	8.0	8.0	7.5	6.5	---	---
18	14.5	14.0	9.5	8.5	8.0	7.5	8.0	7.5	8.5	7.5	---	---
19	15.0	14.0	8.5	8.0	7.5	7.0	8.0	7.5	9.0	8.0	---	---
20	14.5	13.5	8.0	7.0	7.0	7.0	8.5	8.0	9.0	8.5	---	---
21	14.5	13.0	7.0	6.5	7.5	7.0	8.5	8.5	9.0	9.0	---	---
22	14.0	13.5	8.0	7.0	7.5	7.5	8.5	7.5	9.0	8.5	---	---
23	14.5	13.5	8.0	7.5	7.5	7.0	7.5	7.0	9.5	9.0	---	---
24	14.5	14.0	9.0	8.0	8.0	7.5	7.0	6.5	9.5	9.0	---	---
25	14.5	14.0	9.5	9.0	8.0	7.5	7.0	6.5	9.0	8.5	---	---
26	14.0	13.0	10.0	9.5	7.5	7.0	7.5	7.0	9.5	8.5	---	---
27	13.0	12.5	9.5	9.0	7.0	6.5	7.5	7.0	9.0	8.5	---	---
28	12.5	12.0	9.5	9.0	7.0	6.5	7.5	7.0	8.5	7.5	12.0	---
29	12.5	12.0	9.5	9.0	7.0	7.0	7.5	7.5	---	---	12.0	11.5
30	12.5	12.0	9.5	9.5	7.0	7.0	8.0	7.5	---	---	12.5	11.5
31	12.0	11.5	---	---	7.0	6.5	7.5	7.0	---	---	12.0	11.0
MONTH	15.5	11.5	12.5	6.5	10.0	6.5	8.5	5.5	9.5	6.0	12.5	6.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.5	10.5	12.5	10.5	18.0	15.0	17.0	16.0	19.5	17.5	17.5	15.5
2	10.5	10.0	12.5	11.0	18.5	16.0	16.0	15.5	20.0	17.5	18.5	17.0
3	10.5	9.5	12.5	11.0	19.0	16.5	15.5	14.5	20.0	18.0	18.5	16.5
4	11.5	10.0	12.5	11.0	20.0	17.0	15.5	14.0	20.0	18.5	16.0	15.0
5	11.0	10.5	12.0	10.5	20.5	18.0	18.0	14.5	19.5	17.5	15.0	14.5
6	11.0	9.5	13.5	10.5	20.0	18.0	19.5	16.5	20.0	18.0	15.0	14.5
7	11.5	10.0	14.5	12.0	19.5	17.5	20.5	18.0	20.5	18.5	15.0	14.5
8	11.5	10.0	15.0	13.0	19.5	17.5	19.0	18.0	21.0	19.5	15.0	14.0
9	12.5	10.5	15.0	13.5	18.5	16.5	18.0	16.5	21.0	19.5	14.5	14.0
10	13.5	11.5	13.5	12.0	16.5	15.0	18.0	15.5	20.0	19.0	15.0	14.0
11	13.5	12.5	13.0	11.5	17.0	14.0	18.5	16.0	19.5	18.5	15.0	14.0
12	13.0	11.5	12.5	11.5	16.5	16.0	19.0	17.0	19.0	17.5	15.5	14.0
13	12.5	11.5	12.0	11.5	16.5	15.0	20.0	17.5	17.5	16.5	15.5	14.5
14	11.5	10.5	12.0	11.5	16.0	14.5	21.0	18.5	18.0	16.0	15.5	14.0
15	11.0	10.5	12.0	11.0	16.0	14.5	20.5	17.0	18.0	17.0	15.5	14.5
16	10.5	10.0	12.5	11.5	17.0	15.0	17.0	16.0	17.0	16.0	15.5	14.0
17	10.5	10.0	13.5	11.5	18.5	15.5	17.5	15.0	17.5	15.5	15.0	13.5
18	11.5	10.0	15.0	12.0	18.0	15.5	19.0	16.0	17.5	16.0	14.5	13.0
19	11.5	11.0	16.0	13.5	17.0	15.0	20.0	17.5	17.5	17.0	14.5	13.0
20	11.5	10.5	17.0	14.5	18.0	16.5	21.0	18.5	17.0	16.5	15.0	13.5
21	11.0	10.5	16.5	14.0	17.5	16.5	21.0	19.0	16.5	15.5	15.5	14.5
22	10.5	10.0	14.0	12.0	16.5	15.5	21.0	19.0	16.0	15.5	15.0	14.0
23	10.5	9.5	13.0	12.0	16.5	16.0	21.0	19.0	15.5	15.5	16.0	14.0
24	11.5	10.0	13.0	12.0	16.5	15.0	21.0	18.5	16.0	15.5	16.0	15.0
25	11.5	11.0	13.0	12.0	16.0	15.0	21.5	19.0	16.0	14.5	16.0	15.0
26	11.5	11.0	13.0	12.5	17.0	14.5	20.5	19.0	16.5	15.0	16.0	15.0
27	11.0	10.5	13.0	12.0	19.5	16.5	19.0	17.5	17.5	16.0	16.0	15.0
28	12.0	10.5	13.5	12.5	20.0	18.0	19.0	17.0	18.5	16.5	16.0	14.5
29	13.0	11.0	14.5	12.0	19.0	16.5	19.5	17.5	19.0	17.5	16.0	14.5
30	12.5	11.5	15.5	13.5	17.0	16.0	20.0	18.0	18.5	17.0	16.0	15.0
31	---	---	16.5	14.0	---	---	19.5	18.0	16.5	16.0	---	---
MONTH	13.5	9.5	17.0	10.5	20.5	14.0	21.5	14.0	21.0	14.5	18.5	13.0

14166500 LONG TOM RIVER NEAR NOTI, OR

LOCATI⁻⁻.--Lat 44°03'00", long 123°25'30", in sec.33, T.17 S., R.6 W., Lane County, Hydrologic Unit 17090003, on left bank 0.2 mi (0.3 km) upstream from Southern Pacific Railroad bridge, 0.8 mi (1.3 km) downstream from Noti Creek, 1.3 mi (2.1 km) southeast of Noti, and at mile 37.4 (60.2 km).

DRAINAGE AREA.--89.3 mi^2 (231.3 km^2).

PERIOD OF RECORD.--October 1935 to current year.

REVISED RECORDS.--WSP 1318: 1936(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 389.05 ft (118.582 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Weather Bureau). Prior to Nov. 6, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good. Slight regulation caused by logpond above Noti. No diversion above station.

AVERAGE DISCHARGE.--43 years, 236 ft^3/s (6.684 m^3/s), 35.89 in/yr (912 mm/yr), 171,000 acre-ft/yr (211 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,990 ft^3/s (198 m^3/s) Dec. 22, 1955, gage height, 20.17 ft (6.148 m); minimum, 0.04 ft^3/s (0.001 m^3/s) Aug. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft^3/s (45.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 26	0600	2,170	61.5	13.55	4.130	Jan. 7	1230	2,460	69.7	14.31	4.362
Dec. 14	0230	*4,120	117	*17.03	5.191						

Minimum, 5.8 ft^3/s (0.16 m^3/s) Aug. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	62	204	343	342	194	106	158	77	43	11	20
2	10	72	283	320	610	191	145	147	73	44	10	19
3	10	61	949	357	846	185	172	144	72	44	10	19
4	9.5	43	557	699	633	192	154	128	65	42	9.2	28
5	9.5	54	366	914	513	184	216	121	61	42	10	42
6	9.1	76	385	2180	451	169	238	117	58	39	9.2	44
7	12	56	449	1270	465	176	198	110	56	37	10	39
8	14	43	373	878	543	216	168	106	57	35	9.2	40
9	14	35	312	729	507	193	150	104	56	31	8.2	50
10	12	30	283	610	453	180	135	110	61	31	7.2	110
11	10	28	447	525	413	175	126	124	71	30	7.2	66
12	10	26	792	515	383	167	116	123	64	29	8.2	41
13	10	35	1990	493	334	160	111	118	53	28	14	34
14	9.1	51	3370	517	316	155	127	182	61	27	17	30
15	8.6	87	2570	496	316	145	150	225	63	25	14	27
16	8.2	81	2260	502	294	141	150	202	59	37	18	24
17	7.8	62	1880	746	287	137	141	167	57	35	21	24
18	7.5	54	1180	940	276	133	172	147	51	28	18	24
19	7.5	55	789	840	261	133	181	133	52	24	17	24
20	7.5	45	583	683	250	123	191	120	51	24	17	24
21	7.8	43	482	618	240	123	198	110	49	22	24	24
22	7.8	127	417	640	231	121	352	103	48	20	27	22
23	10	377	385	564	225	133	571	103	49	19	24	22
24	14	557	721	488	223	163	388	104	48	18	28	22
25	29	1260	744	435	227	141	290	107	49	16	40	22
26	34	1690	554	404	225	126	254	105	49	15	31	20
27	24	597	449	366	203	118	219	111	47	14	25	20
28	18	352	387	344	201	105	198	102	44	16	23	20
29	28	297	368	321	---	108	176	91	45	16	20	20
30	82	240	434	290	---	106	167	84	43	15	18	20
31	91	---	387	295	---	104	---	83	---	14	19	---
TOTAL	542.9	6596	25350	19322	10268	4697	5960	3889	1689	860	524.4	941
MEAN	17.5	220	818	623	367	152	199	125	56.3	27.7	16.9	31.4
MAX	91	1690	3370	2180	846	216	571	225	77	44	40	110
MIN	7.5	26	204	290	201	104	106	83	43	14	7.2	19
CFSM	.20	2.46	9.16	6.98	4.11	1.70	2.23	1.40	.63	.31	.19	.35
IN.	.23	2.75	10.56	8.05	4.28	1.96	2.48	1.62	.70	.36	.22	.39
AC-FT	1080	13080	50280	38330	20370	9320	11820	7710	3350	1710	1040	1870

CAL YR 1977 TOTAL 47024.20 MEAN 129 MAX 3370 MIN .04 CFSM 1.45 IN 19.59 AC-FT 93270
WTR YR 1978 TOTAL 80639.30 MEAN 221 MAX 3370 MIN 7.2 CFSM 2.48 IN 33.59 AC-FT 159900

14167000 COYOTE CREEK NEAR CROW, OR

LOCATION.--Lat 44°01'19", long 123°15'17", in SW¼NE¼ sec.11, T.18 S., R.5 W., Lane County, Hydrologic Unit 17090003, on right bank 1.0 mi (1.6 km) downstream from Spencer Creek, 4.3 mi (6.9 km) northeast of Crow, and at mile 3.8 (6.1 km).

DRAINAGE AREA.--95.1 mi² (246.3 km²).

PERIOD OF RECORD.--July 1940 to current year.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 374.0 ft (114.00 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Aug. 31, 1940, nonrecording gage near same site at different datums.

REMARKS.--Records fair. No regulation. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.--38 years, 180 ft³/s (5.098 m³/s), 25.70 in/yr (653 mm/yr), 130,400 acre-ft/yr (161 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s (300 m³/s) Feb. 10, 1961, gage height, 14.43 ft (4.398 m), from rating curve extended above 4,700 ft³/s (133 m³/s); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 26	0130	1,920	54.4	10.67	3.252	Jan. 6	0600	2,840	80.4	11.49	3.502
Dec. 15	1300	*3,490	98.8	*11.92	3.633						

Minimum, no flow Aug. 2-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	P
1	.11	10	174	308	220	83	38	124	25	6.1	.02	1.2
2	.20	8.1	159	265	490	78	100	106	22	6.1	.00	1.2
3	.26	6.8	597	359	812	74	131	94	21	6.1	.00	1.0
4	.26	5.7	518	383	783	83	104	88	19	6.5	.00	1.5
5	.26	6.0	288	914	565	84	160	79	17	7.3	.00	2.8
6	.32	7.2	233	2270	426	71	193	69	16	6.5	.00	4.7
7	.51	12	313	1160	430	68	148	61	14	6.1	.00	6.1
8	.41	9.5	242	763	510	107	117	53	13	4.7	.00	6.9
9	.41	7.2	182	573	426	107	101	50	13	4.0	.00	7.3
10	.41	6.0	186	423	323	94	91	54	13	3.5	.00	8.2
11	.32	5.0	494	340	260	89	81	54	16	3.8	.00	18
12	.32	5.0	758	407	217	88	69	54	14	3.2	.00	18
13	.20	5.7	1470	420	163	84	63	53	13	3.2	.00	8.2
14	.14	6.0	2420	440	115	81	78	90	14	3.0	.00	6.9
15	.16	10	2980	403	233	69	128	132	13	3.0	.00	6.5
16	.16	17	2230	504	186	64	161	100	12	3.5	.00	5.7
17	.26	16	2110	850	166	62	139	77	11	4.0	.00	5.0
18	.20	12	1230	994	148	56	127	62	11	4.7	.00	5.0
19	.16	10	737	860	130	52	138	51	7.3	5.0	.00	5.0
20	.14	9.0	474	644	121	48	154	45	3.0	3.2	.00	5.0
21	.16	7.6	322	526	115	44	181	39	2.8	2.8	.00	5.3
22	.20	45	255	565	108	43	369	38	9.7	1.9	.00	4.7
23	.26	139	267	490	103	51	490	39	8.2	1.5	.00	3.8
24	.41	257	592	381	101	87	333	44	8.2	1.5	.16	3.8
25	.51	762	646	316	100	68	247	58	8.2	.25	.71	3.2
26	.41	1490	493	274	100	53	374	47	7.3	.06	3.8	2.5
27	.32	746	329	220	97	49	260	47	7.3	.06	5.3	3.2
28	.32	336	252	193	88	44	194	43	6.9	.03	3.5	3.5
29	2.8	241	253	171	---	43	159	35	6.9	.02	2.5	2.8
30	3.4	195	474	149	---	41	134	31	5.7	.01	1.9	2.8
31	6.4	---	430	145	---	39	---	27	---	.03	1.6	---
TOTAL	20.40	4392.8	22108	16710	7536	2104	5062	1944	358.5	101.66	19.49	159.8
MEAN	.66	146	713	539	269	67.9	169	62.7	12.0	3.28	.63	5.33
MAX	6.4	1490	2980	2270	812	107	490	132	25	7.3	5.3	18
MIN	.11	5.0	159	145	88	39	38	27	2.8	.01	.00	1.0
CFSM	.007	1.54	7.50	5.67	2.83	.71	1.78	.66	.13	.03	.007	.06
IN.	.01	1.72	8.65	6.54	2.95	.82	1.98	.76	.14	.04	.01	.06
AC-FT	40	8710	43850	33140	14950	4170	10040	3860	711	202	39	317

CAL YR 1977 TOTAL 31997.51 MEAN 87.7 MAX 2980 MIN .00 CFSM .92 IN 12.52 AC-FT 63470
WTR YR 1978 TOTAL 60516.65 MEAN 166 MAX 2980 MIN .00 CFSM 1.75 IN 23.67 AC-FT 120000

14168000 FERN RIDGE LAKE NEAR ELMIRA, OR

LOCATION.--Lat 44°07'15", long 123°18'00", near center of sec.4, T.17 S., R.5 W., Lane County, Hydrologic Unit 17090003, in control house at spillway section of dam across Long Tom River and Coyote Creek, 4.5 mi (7.2 km) northeast of Elmira, and at mile 25.7 (41.4 km).

DRAINAGE AREA.--252 mi^2 (653 km^2), not including Amazon Creek basin (see REMARKS).

PERIOD OF RECORD.--October 1941 to current year. Prior to October 1971, published as Fern Ridge Reservoir near Elmira.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earth-fill dam with concrete outlet and spillway, completed in 1941 by Corps of Engineers; storage began Nov. 13, 1941. Total capacity, 116,800 acre-ft (144 hm^3) at elevation 375.1 ft (114.33 m), maximum pool elevation. Usable capacity, 101,100 acre-ft (125 hm^3) between elevations 340.0 ft (103.63 m), sill of outlet gate, and 373.5 ft (113.84 m), normal maximum operating pool level. Reservoir used for flood control and improvement of navigation. Since November 1951, most of flow of Amazon Creek has been diverted in SE¼ sec.29, T.17 S., R.4 W., and discharged into Fern Ridge Reservoir; drainage area at point of diversion, 21.3 mi^2 (55.2 km^2).

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 124,500 acre-ft (154 hm^3) Dec. 27, 1955, elevation, 375.83 ft (114.553 m); minimum since first filling in 1942, 163 acre-ft (201,000 m^3) Nov. 11, 1950, elevation, 344.00 ft (104.851 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 94,470 acre-ft (116 hm^3) June 12, elevation, 373.11 ft (113.724 m); minimum, 6,900 acre-ft (8.51 hm^3) Jan. 24, elevation, 352.81 ft (107.536 m).

Capacity table (elevation, in feet, and usable contents, in acre-feet)

349	2,270	356	12,440	364	37,490	372	87,720
350	3,250	358	17,020	366	46,940	374	105,800
352	5,730	360	22,670	368	58,320	376	126,300
354	8,760	362	29,460	370	71,900		

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	362.37	358.03	356.36	354.16	356.66	364.53	367.27	371.73	373.04	372.93	372.40	371.85
2	362.35	357.68	355.13	353.55	358.10	364.64	367.43	371.79	373.05	372.92	372.37	371.84
3	362.30	357.32	355.01	353.73	359.33	364.75	367.56	371.85	373.05	372.91	372.33	371.87
4	362.28	356.95	354.38	353.57	359.76	364.88	367.67	371.89	373.06	372.89	372.30	371.87
5	362.24	356.61	353.64	356.24	359.85	365.00	367.87	371.93	373.06	372.86	372.26	371.90
6	362.25	356.21	353.36	359.52	359.96	365.11	368.04	371.97	373.05	372.86	372.22	371.90
7	362.21	355.76	353.05	361.03	360.27	365.24	368.17	372.01	373.05	372.84	372.20	371.93
8	362.19	355.26	353.05	361.21	360.57	365.42	368.28	372.05	373.05	372.83	372.17	371.93
9	362.15	354.85	353.17	360.86	360.76	365.57	368.36	372.08	373.04	372.81	372.14	372.01
10	362.12	354.49	353.13	360.15	360.81	365.69	368.42	372.12	373.09	372.80	372.10	372.03
11	362.08	354.12	353.62	359.28	360.77	365.79	368.48	372.18	373.09	372.80	372.07	372.04
12	362.01	353.73	353.95	358.33	360.70	365.91	368.53	372.24	373.10	372.79	372.05	372.04
13	361.90	353.40	358.17	357.39	360.86	366.01	368.58	372.29	373.09	372.78	372.02	372.03
14	361.76	353.14	363.10	356.34	361.19	366.09	368.71	372.39	373.08	372.77	372.00	372.01
15	361.60	353.03	366.44	355.04	361.62	366.17	368.87	372.49	373.07	372.76	372.00	371.99
16	361.42	353.00	368.23	354.77	361.99	366.24	369.01	372.56	373.06	372.75	372.00	371.96
17	361.26	352.98	368.92	355.58	362.31	366.30	369.13	372.61	373.05	372.74	371.99	371.97
18	361.09	352.98	368.87	355.93	362.59	366.36	369.25	372.65	373.05	372.73	371.97	371.94
19	360.91	352.99	368.33	355.90	362.84	366.43	369.39	372.69	373.04	372.72	371.95	371.92
20	360.73	352.99	367.57	355.09	363.06	366.48	369.53	372.71	373.03	372.71	371.94	371.90
21	360.56	353.09	366.64	354.02	363.27	366.54	369.70	372.74	373.02	372.69	371.95	371.88
22	360.37	353.81	365.60	353.41	363.46	366.59	370.03	372.77	373.01	372.67	371.93	371.85
23	360.21	354.06	364.55	352.98	363.65	366.72	370.42	372.83	373.00	372.65	371.92	371.83
24	360.05	354.36	363.66	353.18	363.82	366.81	370.69	372.87	372.98	372.63	371.97	371.81
25	359.91	356.82	362.64	353.30	363.99	366.88	370.90	372.91	372.97	372.61	371.96	371.79
26	359.74	359.52	361.28	353.49	364.14	366.95	371.15	372.96	372.96	372.56	371.95	371.77
27	359.47	360.37	359.85	353.89	364.29	367.00	371.32	372.99	372.96	372.53	371.94	371.75
28	359.18	359.85	358.34	354.30	364.41	367.06	371.45	373.01	372.96	372.51	371.92	371.72
29	358.89	358.97	357.27	354.54	---	367.11	371.55	373.03	372.95	372.49	371.91	371.70
30	358.63	357.83	356.57	355.02	---	367.14	371.65	373.01	372.95	372.46	371.89	371.68
31	358.33	---	355.56	355.66	---	367.21	---	373.02	---	372.42	371.88	---
MEAN	361.05	355.47	359.66	355.85	361.61	366.08	369.25	372.46	373.03	372.72	372.05	371.89
MAX	362.37	360.37	368.92	361.21	364.41	367.21	371.65	373.03	373.10	372.93	372.40	372.04
MIN	358.33	352.98	353.05	352.98	356.66	364.53	367.27	371.73	372.95	372.42	371.88	371.68
(†)	17,880	16,600	11,560	11,750	39,300	53,580	84,790	96,660	96,020	91,330	86,710	85,040
(‡)	-13,160	-1,280	-5,040	+190	+27,550	+14,280	+31,210	+11,870	-640	-4,690	-4,620	-1,670

CAL YR 1977 MEAN 361.55 MAX 368.92 MIN 351.75 AC-FT‡ +6,200
WTR YR 1978 MEAN 365.95 MAX 373.10 MIN 352.98 AC-FT‡ +54,000

† Contents in acre-feet, at 2400, on last day of month.
‡ Change in contents, in acre-feet.

14169001 LONG TOM RIVER NEAR ALVADORE, OR

LOCATION.—Lat 44°07'25", long 123°17'55", in SW¼NE¼ sec.4, T.17 S., R.5 W., Lane County, Hydrologic Unit 17090003, on left bank 0.2 mi (0.3 km) downstream from Fern Ridge Dam, 1.7 mi (2.7 km) west of Alvadore, and at mile 25.5 (41.0 km).

DRAINAGE AREA.--252 mi² (653 km²), not including Amazon Creek basin.

PERIOD OF RECORD.—August 1939 to current year. Prior to October 1943, published as "at Smithfield," and October 1943 to September 1959, as "below Fern Ridge Dam, near Smithfield."

REVISED RECORDS.—WSP 1248: 1940-41, 1948.

GAGE.—Water-stage recorder and masonry control. Datum of gage is 332.00 ft (101.194 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Sept. 21, 1939, nonrecording gage and Sept. 21, 1939, to Sept. 30, 1943, water-stage recorder at site 2.5 mi (4.0 km) downstream at datum 11.09 ft (3.380 m) lower.

REMARKS.—Records good. Flow regulated since 1941 by Fern Ridge Lake (see station 14168000). Several small diversions for irrigation above station. Records include diversion to Coyote Creek Channel. Point of diversion is 500 ft (152 m) upstream and point of return, 2.3 mi (3.7 km) downstream. Discharge not adjusted for storage or release from Fern Ridge Lake as evaporation from reservoir at times exceeds natural flow and diversions, and beginning in November 1951, most of flow of Amazon Creek has been diverted into Fern Ridge Lake.

AVERAGE DISCHARGE.—39 years, 539 ft³/s (15.26 m³/s), 390,500 acre-ft/yr (481 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,500 ft³/s (326 m³/s) Jan. 1, 1943, gage height, 15.12 ft (4.609 m), site and datum then in use; minimum daily, 2 ft³/s (0.057 m³/s) Aug. 7, 1941.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 4,060 ft³/s (115 m³/s) Dec. 18, 19; minimum daily, 26 ft³/s (0.74 m³/s) June 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	499	1990	1890	52	48	35	30	27	47	67	43
2	64	505	1960	1260	52	48	37	30	27	47	63	43
3	65	499	1960	1020	629	48	36	30	28	47	63	41
4	65	504	1950	1390	1260	48	33	30	28	46	64	42
5	64	505	1470	1500	1270	48	29	31	28	44	64	42
6	65	499	1080	1400	993	45	29	31	28	44	64	41
7	65	504	1170	1510	895	39	29	31	28	44	64	37
8	64	504	870	2080	902	40	29	31	28	44	64	35
9	64	380	684	2460	909	40	29	31	28	46	64	35
10	62	304	758	2450	909	40	29	31	28	47	64	36
11	64	300	1370	2470	908	40	29	32	28	47	62	66
12	143	295	2040	2460	895	40	28	31	26	47	62	92
13	206	291	931	2450	461	39	28	31	27	47	64	95
14	257	261	71	2410	128	40	31	32	27	47	64	95
15	296	174	74	2370	81	40	30	32	28	47	60	95
16	292	128	1520	1880	49	37	26	30	34	47	53	95
17	292	117	3240	1880	49	36	27	30	37	47	52	95
18	288	94	3760	2390	51	36	28	30	40	47	48	95
19	288	70	4010	2460	51	36	28	30	40	47	45	95
20	292	59	3960	2460	51	36	27	30	40	47	46	92
21	292	57	3950	2460	47	36	28	31	43	47	46	92
22	292	163	3920	2110	46	36	32	31	44	47	37	92
23	296	450	3910	1620	46	36	29	28	44	47	35	92
24	292	1020	3890	1080	46	33	28	26	44	47	37	92
25	296	918	3980	940	46	33	29	26	44	50	37	92
26	296	51	3940	817	46	34	30	26	44	53	37	92
27	391	835	3420	570	46	34	29	26	44	53	36	92
28	499	1640	2940	485	48	34	30	28	46	58	36	92
29	494	1950	2390	493	---	35	30	29	47	64	40	92
30	494	1980	1970	269	---	35	30	28	47	64	43	92
31	494	---	1970	53	---	35	---	27	---	64	43	---
TOTAL	7197	15556	71148	51087	10966	1205	892	920	1052	1520	1624	2230
MEAN	232	519	2295	1648	392	38.9	29.7	29.7	35.1	49.0	52.4	74.3
MAX	499	1980	4010	2470	1270	48	37	32	47	64	67	95
MIN	62	51	71	53	46	33	26	26	26	44	35	35
AC-FT	14280	30860	141100	101300	21750	2390	1770	1820	2090	3010	3220	4420

CAL YR 1977 TOTAL 106003.2 MEAN 290 MAX 4010 MIN 3.4 AC-FT 210300
WTR YR 1978 TOTAL 165397.0 MEAN 453 MAX 4010 MIN 26 AC-FT 328100

14170000 LONG TOM RIVER AT MONROE, OR

LOCATION.--Lat 44°18'50", long 123°17'45", in NE¼ sec.33, T.14 S., R.5 W., Benton County, Hydrologic Unit 17090003, on left bank in canalized river channel at Monroe, 110 ft (34 m) upstream from bridge on State Highway 99W, 0.1 mi (0.2 km) downstream from Shafer Creek, and at mile 6.8 (10.9 km).

DRAINAGE AREA.--391 mi^2 (1,013 km^2).

PERIOD OF RECORD.--November 1920 to July 1921, October 1921 to April 1926, November 1926 to May 1927, October 1927 to current year. Prior to October 1930, published as "near Monroe."

REVISED RECORDS.--WSP 654: Drainage area. WSP 1248: 1923, 1927, 1928(M). WSP 1288: 1952.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 270.57 ft (82.470 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 24, 1944, nonrecording gage at various sites ranging from present site to 1.5 mi (2.4 km) downstream at different datums.

REMARKS.--Records fair. Flow regulated since 1941 by Fern Ridge Lake (see station 14168000). Several small diversions above station.

AVERAGE DISCHARGE.--55 years (water years 1922-25, 1928-78), 776 ft^3/s (21.98 m^3/s), 562,200 acre-ft/yr (693 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft^3/s (547 m^3/s) Jan. 2, 1943, gage height, 17.14 ft (5.224 m), site and datum then in use, from graph based on gage readings, includes some overflow from Willamette River near Junction City; no flow Oct. 20-22, 1944 (water filling pool at gage); minimum observed prior to regulation, 7 ft^3/s (0.20 m^3/s) Sept. 29, Oct. 1, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,210 ft^3/s (176 m^3/s) Dec. 17, gage height, 8.73 ft (2.661 m); minimum, 26 ft^3/s (0.74 m^3/s) July 24, 25, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	487	2370	2340	595	171	108	191	71	44	37	42
2	78	527	2520	1930	1280	152	152	161	68	53	39	39
3	78	503	3200	1620	1560	161	191	133	68	44	37	42
4	78	487	2690	2370	1950	152	152	147	65	44	34	39
5	78	527	2210	3220	2020	156	201	142	68	42	39	50
6	78	527	1600	4430	1640	152	233	120	47	30	42	68
7	78	471	1690	2840	1590	147	171	100	53	32	39	68
8	78	511	1360	2970	1730	201	152	100	42	32	42	65
9	78	411	970	3490	1540	196	116	96	39	32	39	65
10	78	316	1120	3220	1430	152	112	100	39	39	42	96
11	75	310	1950	3200	1360	147	108	104	47	37	39	75
12	89	298	3230	3370	1320	147	112	116	42	39	42	104
13	196	250	4590	3330	980	156	108	96	39	37	39	104
14	217	298	3550	3380	383	152	116	142	39	35	45	112
15	279	212	3640	3200	419	147	176	181	37	28	42	116
16	273	156	3690	3100	329	129	212	166	37	39	42	108
17	279	147	5800	3270	316	104	152	129	37	37	42	108
18	279	138	4940	3770	291	108	181	112	42	37	42	104
19	273	104	4730	3730	256	112	196	104	39	37	39	108
20	273	75	4510	3400	244	108	201	104	37	34	42	104
21	279	68	4410	3330	244	116	201	108	34	34	42	108
22	256	171	4260	3280	206	108	552	104	39	34	42	104
23	262	578	4360	2440	206	125	676	104	37	37	37	104
24	262	1170	5020	1830	201	147	362	104	42	30	44	104
25	262	2560	4690	1390	217	138	273	100	37	34	39	104
26	250	1550	4430	1330	196	108	376	104	37	34	39	104
27	329	1030	4070	1000	206	112	285	100	37	34	42	104
28	463	2040	3370	799	196	104	212	104	34	30	39	104
29	471	2430	3120	809	---	104	201	104	37	39	37	104
30	456	2440	2690	712	---	104	176	100	39	42	39	104
31	527	---	2490	316	---	108	---	75	---	39	39	---
TOTAL	6830	20792	103270	79416	22905	4224	6464	3651	1329	1139	1243	2661
MEAN	220	693	3331	2562	818	136	215	118	44.3	36.7	40.1	88.7
MAX	527	2560	5800	4430	2020	201	676	191	71	53	45	116
MIN	75	68	970	316	196	104	108	75	34	28	34	39
AC-FT	13550	41240	204800	157500	45430	8380	12820	7240	2640	2260	2470	5280

CAL YR 1977 TOTAL 152031 MEAN 417 MAX 5800 MIN 14 AC-FT 301600
WTR YR 1978 TOTAL 253924 MEAN 696 MAX 5800 MIN 28 AC-FT 503700

14170500 ROCK CREEK NEAR PHILOMATH, OR

LOCATION.--Lat 44°30'05", long 123°26'20", in SW¼NE¼ sec.29, T.12 S., R.6 W., Benton County, Hydrologic Unit 17090003, on left bank 600 ft (183 m) upstream from bridge on State Highway 34, 4.5 mi (7.2 km) southwest of Philomath, and at mile 0.4 (0.6 km).

DRAINAGE AREA.--14.6 mi^2 (37.8 km^2).

PERIOD OF RECORD.--October 1945 to September 1952, water years 1953-60 (annual maximum), October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 349.08 ft (106.400 m) National Geodetic Vertical Datum of 1929. Prior to October 1974, at site 0.2 mi (0.3 km) downstream at datum 5.08 ft (1.548 m) higher.

REMARKS.--Records excellent. Flow regulated by small storage reservoir operated by city of Corvallis, most low-water flow diverted to city of Corvallis water supply system.

AVERAGE DISCHARGE.--11 years, 53.0 ft^3/s (1.501 m^3/s), 49.30 in/yr (1,252 mm/yr), 38,400 acre-ft/yr (47.3 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,190 ft^3/s (62.0 m^3/s) Dec. 21, 1955, gage height, 6.82 ft (2.079 m), at site and datum then in use, from rating curve extended above 810 ft^3/s (22.9 m^3/s), on basis of slope-area measurement of peak flow; maximum gage height, 13.17 ft (4.014 m) Dec. 15, 1977; minimum discharge, 0.2 ft^3/s (0.006 m^3/s) Aug. 24, 1946, for several days in summers of 1949 and 1950, Sept. 1-3, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 24, 1964, reached a stage of 7.30 ft (2.225 m), discharge, 2,500 ft^3/s (708 m^3/s), at site 0.2 mi (0.3 km) downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s (14.2 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	1530	565	16.0	12.25	3.734	Jan. 5	1730	677	19.2	12.54	3.822
Dec. 15	1200	*928	26.3	*13.17	4.014						

Minimum, 2.4 ft^3/s (0.068 m^3/s) Aug. 28 to Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	38	56	47	108	38	20	35	18	11	3.0	2.5
2	3.7	58	122	45	210	35	27	32	17	11	3.2	2.5
3	3.5	27	148	153	161	33	29	29	16	11	3.0	2.7
4	3.2	20	98	215	110	33	28	28	15	11	3.0	4.4
5	3.1	26	75	335	93	30	80	26	15	10	2.9	6.2
6	3.4	28	108	333	112	28	54	25	14	9.4	2.7	4.2
7	5.3	24	110	197	163	34	41	23	15	9.4	2.9	3.2
8	4.3	20	90	208	190	35	34	22	15	9.1	3.0	5.3
9	3.7	17	74	201	160	30	30	23	15	9.7	2.6	14
10	3.2	15	75	154	128	28	26	21	17	10	2.6	15
11	3.1	14	309	122	101	26	24	26	15	9.0	2.7	8.4
12	3.1	14	229	99	85	25	23	23	14	7.8	3.0	6.2
13	3.1	21	646	105	73	28	22	44	15	8.7	3.2	6.2
14	3.1	24	536	106	69	26	24	120	15	7.5	3.2	5.1
15	3.0	39	773	94	68	25	26	99	15	5.1	3.3	5.5
16	3.2	39	433	116	62	24	26	67	14	6.0	3.5	6.2
17	3.2	30	272	180	58	23	45	52	13	5.1	3.2	7.0
18	3.1	26	188	172	54	22	78	44	13	4.8	2.9	9.4
19	3.1	21	141	161	50	21	66	38	13	4.4	2.7	7.0
20	3.2	18	108	137	47	20	56	34	12	4.0	4.2	6.7
21	3.2	17	88	153	44	20	59	30	12	3.8	3.5	6.0
22	3.1	57	75	161	41	19	227	28	11	3.6	3.2	6.0
23	4.9	154	72	126	39	28	153	28	11	3.5	3.2	6.4
24	5.1	229	78	98	39	47	96	28	11	3.5	6.7	6.2
25	7.5	430	70	82	49	43	73	25	11	3.5	4.6	6.4
26	6.9	247	62	70	50	33	59	25	11	3.3	3.6	6.2
27	4.9	126	55	61	45	28	50	24	9.7	3.3	3.0	6.2
28	6.2	80	50	56	41	25	45	22	9.4	3.5	2.7	6.2
29	39	75	53	50	---	23	40	20	9.7	3.3	2.5	6.2
30	53	61	60	46	---	21	39	19	11	3.2	2.4	6.2
31	34	---	52	47	---	20	---	18	---	3.0	2.5	---
TOTAL	236.4	1995	5306	4130	2450	871	1600	1078	402.8	201.5	98.7	189.7
MEAN	7.63	66.5	171	133	87.5	28.1	53.3	34.8	13.4	6.50	3.18	6.32
MAX	53	430	773	335	210	47	227	120	18	11	6.7	15
MIN	3.0	14	50	45	39	19	20	18	9.4	3.0	2.4	2.5
CFSM	.52	4.56	11.7	9.11	5.99	1.93	3.65	2.38	.92	.45	.22	.43
IN.	.60	5.08	13.52	10.52	6.24	2.22	4.08	2.75	1.03	.51	.25	.48
AC-FT	469	3960	10520	8190	4860	1730	3170	2140	799	400	196	376

CAL YR 1977 TOTAL 12333.9 MEAN 33.8 MAX 773 MIN 1.4 CFSM 2.32 IN 31.42 AC-FT 24460
WTR YR 1978 TOTAL 18559.1 MEAN 50.8 MAX 773 MIN 2.4 CFSM 3.48 IN 47.28 AC-FT 36810

14171000 MARYS RIVER NEAR PHILOMATH, OR

LOCATION.—Lat 44°31'35", long 123°20'00", in NE¼SE¼ sec.18, T.12 S., R.5 W., Benton County, Hydrologic Unit 17090003, on left bank 50 ft (15 m) downstream from bridge on Bellfountain Road, 0.6 mi (1.0 km) downstream from Newton Creek, 2.0 mi (3.2 km) southeast of Philomath, and at mile 9.4 (15.1 km).

DRAINAGE AREA.—159 mi^2 (412 km^2), including drainage area of Evergreen Creek above Bellfountain Road, 1.4 mi (2.3 km) south of station.

PERIOD OF RECORD.—October 1940 to current year.

REVISED RECORDS.—WSP 1218: Drainage area. WSP 1935: 1956(M).

GAGE.—Water-stage recorder. Datum of gage is 224.01 ft (68.278 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1961, nonrecording gage at bridge 50 ft (15 m) upstream at same datum.

REMARKS.—Records good. Records include flow of Evergreen Creek at Bellfountain Road crossing 1.4 mi (2.3 km) south of station, with which overflow from Marys River may at times be mingled. Slight regulation by small storage reservoir on Rock Creek from which municipal supply is diverted for city of Corvallis. Other small diversions above station for irrigation.

AVERAGE DISCHARGE.—38 years, 464 ft^3/s (13.14 m^3/s), 39.63 in/yr (1,007 mm/yr), 336,200 acre-ft/yr (415 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 13,600 ft^3/s (385 m^3/s) Dec. 22, 1964, gage height, 20.72 ft (6.315 m); maximum gage height, 20.91 ft (6.373 m) Jan. 15, 1974; minimum discharge, 0.60 ft^3/s (0.017 m^3/s) Aug. 23, 1967.

EXTREMES FOR CURRENT YEAR.—Peak discharges above base of 3,200 ft^3/s (90.6 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	-	3,800	108	18.3	5.578	Jan. 5	2230	3,560	101	17.82	5.432
Dec. 15	1330	*7,890	223	*20.61	6.282						

Minimum, 12 ft^3/s (0.34 m^3/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	184	616	464	694	287	157	287	136	54	19	19
2	26	320	1090	447	1210	272	183	254	126	55	18	19
3	21	275	2140	738	1080	259	219	233	119	53	18	21
4	21	186	1800	1300	863	259	200	218	112	52	17	28
5	19	196	1220	1920	771	245	366	205	107	50	16	41
6	19	229	1070	2800	848	228	416	190	97	46	18	42
7	23	197	1030	1970	1140	243	339	179	92	43	16	38
8	26	167	883	1850	1350	272	287	170	90	41	15	40
9	30	140	752	1660	1200	245	251	167	88	41	15	59
10	27	122	698	1340	1030	229	227	167	98	43	15	114
11	25	108	1600	1110	878	220	206	178	102	42	14	87
12	24	96	1710	987	775	212	191	177	92	41	15	62
13	23	117	3660	973	680	219	183	200	88	40	19	53
14	23	148	5040	1000	605	219	188	565	87	38	19	50
15	23	264	7080	915	603	201	214	704	95	35	18	48
16	23	357	5170	1050	542	192	222	599	93	40	22	44
17	23	306	3170	1410	506	186	239	487	82	41	25	42
18	22	250	2180	1460	471	180	368	410	76	38	23	51
19	22	218	1600	1420	438	172	402	348	75	34	22	55
20	22	178	1230	1160	410	166	378	299	71	32	27	49
21	22	158	1010	1150	383	161	383	261	67	31	27	43
22	21	233	850	1260	358	157	977	237	66	27	29	39
23	25	642	744	1060	339	192	1010	233	65	26	26	38
24	29	1410	720	903	338	283	724	228	64	23	32	36
25	33	3400	666	794	352	265	579	214	63	22	32	35
26	41	5000	599	704	355	228	504	203	63	21	30	34
27	38	1750	538	616	334	202	426	206	58	22	27	32
28	38	1080	495	563	306	188	372	189	55	22	24	31
29	69	859	499	509	---	179	329	171	52	22	21	31
30	212	724	572	464	---	170	307	157	53	22	19	31
31	219	---	511	452	---	162	---	146	---	21	19	---
TOTAL	1215	19314	50943	34449	18859	6693	10847	8282	2532	1118	657	1312
MEAN	39.2	644	1643	1111	674	216	362	267	84.4	36.1	21.2	43.7
MAX	219	5000	7080	2800	1350	287	1010	704	136	55	32	114
MIN	19	96	495	447	306	157	157	146	52	21	14	19
CFSM	.25	4.05	10.3	6.99	4.24	1.36	2.28	1.68	.53	.23	.13	.28
IN.	.28	4.52	11.92	8.06	4.41	1.57	2.54	1.94	.59	.26	.15	.31
AC-FT	2410	38310	101000	68330	37410	13280	21520	16430	5020	2220	1300	2600

CAL YR 1977 TOTAL 106854.6 MEAN 293 MAX 7080 MIN 3.8 CFSM 1.84 IN 25.00 AC-FT 211900
WTR YR 1978 TOTAL 156221.0 MEAN 428 MAX 7080 MIN 14 CFSM 2.69 IN 36.55 AC-FT 309900

14171750 WILLAMETTE RIVER ABOVE CALAPOOIA RIVER, AT ALBANY, OR

LOCATION.--Lat 44°38'30", long 123°07'00", in NW¼ sec.1, T.11 S., R.4 W., Benton County, Hydrologic Unit 17090003, temperature recorder on left bank, 0.6 mi (1.0 km) upstream from gaging station at Albany, 0.4 mi (0.6 km) upstream from Calapooia River, and at mile 119.9 (192.9 km).

DRAINAGE AREA.--4,460 mi^2 (11,600 km^2), approximately.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 23.5°C Aug. 3, 1977; minimum, 0.5°C Jan. 26, 1969, Dec. 11, 1972.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 23.0°C July 21-23, 25, Aug. 8, 9; minimum, 4.5°C Jan. 2.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.0	14.0	12.5	12.0	9.5	9.0	6.0	5.0	8.0	7.5	8.0	7.5
2	14.5	13.5	12.5	12.0	10.0	9.5	5.0	4.5	8.0	7.5	7.5	7.0
3	14.5	13.0	12.0	10.5	10.0	10.0	5.5	5.0	8.5	7.5	7.5	6.5
4	14.0	13.0	10.5	9.0	10.0	9.5	6.0	5.5	8.5	8.0	8.5	7.5
5	14.5	13.5	11.0	9.0	9.5	9.0	6.5	6.0	8.5	8.5	9.0	7.5
6	15.0	14.0	11.5	10.0	9.0	9.0	7.0	6.5	8.5	8.5	9.0	8.0
7	15.0	14.0	11.0	10.0	9.0	8.5	7.0	7.0	8.5	8.5	9.0	8.5
8	15.0	14.0	10.5	10.0	8.5	7.5	7.5	7.0	8.5	7.5	10.0	9.0
9	14.5	13.5	10.0	9.0	7.5	7.5	8.0	7.5	8.0	7.5	10.5	9.0
10	15.0	13.5	9.5	9.0	8.0	7.5	8.0	7.5	7.5	6.5	10.5	9.0
11	15.5	13.5	10.0	8.5	8.5	8.0	8.0	7.5	7.0	6.5	10.0	9.0
12	15.5	14.0	10.0	9.0	8.5	8.5	8.0	7.0	6.5	6.0	9.5	8.5
13	16.0	14.5	11.0	9.5	10.0	8.5	7.5	7.0	6.5	6.0	10.0	8.5
14	15.5	14.5	11.0	10.0	10.5	9.5	7.5	7.5	7.0	6.5	10.0	8.5
15	15.5	14.0	11.0	9.5	10.5	9.5	8.0	7.5	7.5	7.0	9.0	8.0
16	15.5	15.0	10.5	10.0	---	---	8.0	7.0	7.0	7.0	10.0	8.0
17	15.5	14.0	10.0	9.0	---	---	8.0	8.0	7.5	7.0	11.0	9.0
18	15.0	14.0	9.5	8.5	---	---	8.0	7.5	8.5	7.0	11.5	10.0
19	15.5	14.0	8.5	7.5	---	---	8.0	7.5	8.5	8.0	12.5	10.5
20	15.0	14.0	7.5	7.0	---	---	8.5	8.0	9.0	8.5	13.0	11.5
21	14.5	14.0	7.0	6.5	---	---	8.5	8.5	9.0	9.0	12.5	11.5
22	14.5	13.5	7.0	6.0	---	---	8.5	7.5	9.0	9.0	12.0	11.0
23	15.0	14.0	7.5	7.0	---	---	7.5	7.0	9.5	8.5	11.5	11.0
24	15.0	14.0	8.5	7.5	---	---	7.0	6.5	10.0	9.0	11.5	10.5
25	15.0	14.0	10.0	8.5	---	---	6.5	6.5	10.0	9.0	12.0	10.5
26	14.5	13.5	10.5	9.5	---	---	7.0	6.5	10.0	9.0	13.0	11.0
27	13.5	12.5	10.0	9.5	---	---	7.0	7.0	9.5	8.5	13.0	12.0
28	13.0	12.0	9.5	9.5	---	---	7.5	7.0	9.0	8.0	13.0	11.5
29	13.0	12.0	9.5	9.5	6.5	6.0	7.5	7.5	---	---	13.5	12.0
30	12.5	12.0	10.0	9.5	6.5	6.5	7.5	7.0	---	---	13.0	11.5
31	12.5	12.0	---	---	6.5	6.0	7.5	7.5	---	---	12.5	10.5
MONTH	16.0	12.0	12.5	6.0	10.5	6.0	8.5	4.5	10.0	6.0	13.5	6.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.5	11.0	12.5	11.0	17.5	14.5	18.0	16.5	21.5	19.0	18.0	16.5
2	11.5	10.0	12.5	11.0	19.0	15.5	17.5	16.5	21.5	19.0	18.5	17.5
3	11.5	9.5	12.5	11.0	19.5	17.0	16.5	15.0	22.0	19.5	19.0	17.0
4	11.5	10.0	12.5	11.0	20.5	18.0	16.0	15.0	21.5	19.5	17.5	16.0
5	11.5	10.5	12.5	10.5	21.5	18.5	17.5	15.0	21.5	19.0	16.0	15.0
6	11.0	10.0	13.0	10.5	21.0	19.0	19.5	16.5	21.5	19.0	16.0	14.0
7	11.5	9.5	14.5	11.5	20.0	18.5	21.0	18.0	22.0	20.0	16.0	15.0
8	12.0	10.5	15.0	13.0	20.5	18.0	21.0	18.5	23.0	20.5	15.5	14.0
9	12.5	11.0	15.0	13.5	19.0	18.0	19.5	18.0	23.0	21.0	15.5	14.0
10	13.5	11.5	14.0	12.0	18.0	16.0	18.0	17.0	22.5	20.5	15.5	14.0
11	13.5	11.5	13.0	11.0	17.5	14.5	19.0	16.5	21.5	20.0	16.0	14.5
12	13.0	11.0	12.5	11.5	17.0	15.5	20.0	17.0	20.0	19.0	16.0	14.5
13	12.5	11.0	12.5	11.5	17.0	15.5	21.0	18.5	18.5	18.0	15.5	14.5
14	11.5	10.5	11.0	11.0	16.5	15.0	22.0	19.0	19.0	17.0	16.0	14.0
15	10.5	9.0	12.0	10.5	16.0	15.0	21.5	18.5	19.0	17.5	16.5	15.0
16	10.5	9.0	12.5	11.0	17.0	15.5	19.5	18.0	18.5	17.0	16.0	14.5
17	10.5	9.0	12.5	11.5	18.5	15.0	19.0	17.0	18.0	16.5	15.5	14.0
18	11.0	8.5	14.5	11.5	18.0	16.5	19.5	16.5	19.0	17.0	15.0	13.5
19	11.0	9.0	16.0	13.5	18.0	16.0	21.0	18.0	18.0	17.0	15.0	14.0
20	11.0	10.0	17.0	14.5	19.0	16.0	22.0	19.5	18.0	17.0	15.0	13.5
21	11.0	10.0	16.5	14.5	18.0	16.5	23.0	20.0	17.0	16.5	15.5	14.5
22	10.5	9.5	15.0	13.5	17.5	16.5	23.0	20.5	17.0	15.5	15.5	14.5
23	10.0	8.5	13.0	12.0	17.0	15.5	23.0	20.5	16.5	15.5	16.0	14.0
24	10.5	8.5	13.0	12.0	17.5	16.0	22.5	20.5	16.5	15.5	16.5	15.0
25	11.0	10.0	13.0	11.5	16.5	15.5	23.0	20.5	16.5	15.5	16.5	15.5
26	11.5	10.5	12.5	11.5	18.0	15.0	22.0	20.5	17.5	15.0	17.0	15.5
27	11.5	10.5	13.5	12.0	19.5	16.0	21.5	19.5	18.5	16.0	17.0	15.5
28	11.5	10.5	13.0	12.0	21.0	18.0	20.0	18.5	19.0	17.5	16.5	15.5
29	12.5	11.0	14.5	12.5	20.0	18.5	21.0	18.0	20.0	18.0	16.5	14.5
30	12.5	11.0	15.5	13.0	19.0	17.5	21.5	19.0	19.5	18.5	16.0	14.5
31	---	---	16.5	14.0	---	---	21.5	19.5	19.0	17.5	---	---
MONTH	13.5	8.5	17.0	10.5	21.5	14.5	23.0	15.0	23.0	15.0	19.0	13.5

14172000 CALAPOOIA RIVER AT HOLLEY, OR

LOCATION.--Lat 44°21'05", long 122°47'10", in SE¼ sec.15, T.14 S., R.1 W., Linn County, Hydrologic Unit 17090003, on right bank 200 ft (61 m) downstream from bridge on State Highway 228, 0.3 mi (0.5 km) southwest of Holley, 5.0 mi (8.0 km) upstream from Brush Creek, and at mile 45.4 (73.0 km).

DRAINAGE AREA.--105 mi^2 (272 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1935 to current year. Prior to October 1963, published as Calapooya River at Holley.

REVISED RECORDS.--WSP 1044: 1943. WSP 1218: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 527.58 ft (160.806 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1963, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good. Slight regulation at times during low-water periods by small dam upstream. Diversions for irrigation above station.

AVERAGE DISCHARGE.--43 years, 444 ft^3/s (12.57 m^3/s), 57.42 in/yr (1,458 mm/yr), 321,700 acre-ft/yr (397 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft^3/s (357 m^3/s) Dec. 22, 1964, gage height, 14.60 ft (4.450 m); maximum gage height, 15.30 ft (4.663 m) Dec. 22, 1964 (backwater from debris); minimum discharge observed, 13 ft^3/s (0.37 m^3/s) Sept. 8, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft^3/s (96.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2100	6,110	173	7.99	2.435	Dec. 13	1830	*6,770	192	*8.67	2.643

Minimum, 32 ft^3/s (0.91 m^3/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	438	944	546	579	258	165	510	203	86	42	56
2	60	738	1500	505	1130	245	248	442	189	102	41	52
3	55	453	2340	590	1870	233	281	389	175	102	41	50
4	55	318	1520	677	1260	248	271	368	165	102	40	54
5	50	350	1170	1370	980	242	328	344	155	95	39	88
6	50	419	1330	1820	865	233	344	310	145	86	38	106
7	60	370	1860	1310	858	230	310	281	138	82	38	119
8	65	326	1310	1080	887	271	281	261	134	79	36	127
9	60	271	1010	925	801	281	265	261	134	77	34	167
10	55	231	869	829	684	265	265	281	167	76	33	325
11	52	204	1480	727	601	268	255	429	183	73	34	321
12	50	189	1900	774	541	268	233	525	152	70	39	236
13	48	254	4610	740	480	265	215	461	157	67	53	183
14	47	478	4940	708	447	265	215	636	145	64	50	167
15	46	1130	4920	647	456	252	206	972	160	62	57	141
16	44	862	3360	715	415	239	230	844	148	77	91	121
17	44	570	2790	933	398	233	261	671	134	80	95	119
18	43	448	1900	972	385	224	258	557	125	68	65	132
19	41	366	1350	917	372	212	281	466	123	64	53	119
20	41	310	1040	794	364	200	306	406	114	60	57	108
21	41	274	851	858	344	191	368	360	110	56	82	99
22	39	1120	734	964	325	183	636	328	106	53	88	93
23	47	1330	808	822	302	245	702	302	106	51	114	88
24	58	1790	1580	702	292	268	596	285	110	50	100	83
25	149	4100	1400	630	278	230	613	285	121	48	180	79
26	274	3480	1030	579	321	212	1330	265	108	47	114	76
27	172	1980	822	525	299	197	1130	295	99	47	86	73
28	122	1460	690	490	274	186	851	313	91	47	74	70
29	113	1520	684	461	---	178	684	274	90	46	65	67
30	296	1190	708	424	---	178	579	245	88	45	60	67
31	473	---	618	433	---	170	---	224	---	43	58	---
TOTAL	2810	26969	52068	24467	16808	7170	12707	12590	4075	2105	1997	3586
MEAN	90.6	899	1680	789	600	231	424	406	136	67.9	64.4	120
MAX	473	4100	4940	1820	1870	281	1330	972	203	102	180	325
MIN	39	189	618	424	274	170	165	224	88	43	33	50
CFSM	.86	8.56	16.0	7.51	5.71	2.20	4.04	3.87	1.30	.65	.61	1.14
IN.	1.00	9.55	18.45	8.67	5.95	2.54	4.50	4.46	1.44	.75	.71	1.27
AC-FT	5570	53490	103300	48530	33340	14220	25200	24970	8080	4180	3960	7110

CAL YR 1977 TOTAL 145400 MEAN 398 MAX 4940 MIN 24 CFSM 3.79 IN 51.51 AC-FT 288400
WTR YR 1978 TOTAL 167352 MEAN 458 MAX 4940 MIN 33 CFSM 4.36 IN 59.29 AC-FT 331900

14172000 CALAPOOIA RIVER AT HOLLEY, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: October 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: Maximum, 29.5°C July 17, Aug. 7, 1972, Aug. 12, 16, 1977; minimum, 0.0°C Dec. 19, 20, 1965, Dec. 7, 12-16, 1972.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum, 28.5°C Aug. 8; minimum, 2.5°C Nov. 20.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.5	10.5	9.5	8.0	9.5	8.5	5.0	4.0	7.0	6.0	6.0	3.5
2	13.0	11.0	9.0	6.5	9.5	9.0	5.0	4.5	7.5	6.5	7.0	3.5
3	15.0	10.5	6.5	5.5	9.0	9.0	7.5	5.0	8.0	7.0	8.5	6.5
4	14.5	10.0	6.5	5.0	9.0	8.0	7.5	7.0	8.0	6.5	7.5	6.5
5	14.5	10.5	7.5	6.5	8.0	7.5	7.5	7.0	8.5	8.0	8.5	7.0
6	12.5	10.5	8.0	7.0	9.0	8.5	8.0	7.5	8.0	7.0	9.5	7.5
7	14.0	11.5	8.0	7.0	8.5	7.0	8.0	7.0	8.0	7.0	9.5	8.5
8	13.5	10.5	6.5	5.0	7.5	6.5	8.5	8.0	7.0	6.5	9.5	8.5
9	13.5	10.0	6.5	5.0	8.0	6.0	8.5	8.0	7.0	5.5	9.5	7.5
10	13.0	9.0	7.5	6.0	9.0	8.0	8.5	8.0	5.5	4.5	8.5	6.0
11	13.5	9.0	7.5	6.5	9.5	8.5	8.0	6.5	5.5	4.0	8.0	7.0
12	13.5	9.5	8.5	6.5	9.0	8.5	8.0	7.0	5.5	4.0	8.5	6.0
13	13.5	11.0	8.5	7.5	10.5	9.0	8.0	8.0	6.0	4.5	8.5	6.5
14	14.0	11.5	8.0	7.5	11.0	9.5	8.5	7.5	6.5	5.0	8.5	6.0
15	14.5	10.5	9.0	8.0	9.5	8.0	8.0	7.5	6.5	5.0	7.5	4.5
16	13.5	11.0	8.0	7.0	9.5	8.0	8.5	7.5	6.0	4.0	9.5	5.0
17	13.0	10.0	7.0	6.0	9.5	8.0	8.5	7.5	7.0	5.5	11.5	6.5
18	12.0	9.5	6.0	4.5	9.0	7.5	7.5	7.0	8.5	6.5	11.5	7.5
19	12.5	9.5	4.5	3.5	8.0	6.0	8.0	7.0	8.5	6.0	12.0	8.0
20	11.0	9.0	3.5	2.5	7.0	5.5	9.0	8.0	8.5	6.0	12.5	8.0
21	12.5	8.5	4.0	3.5	8.0	7.0	8.0	7.5	8.0	7.5	11.0	8.5
22	11.5	8.5	6.5	4.0	7.5	7.0	7.0	6.0	8.0	7.5	11.0	8.5
23	12.5	10.0	7.5	6.5	8.0	7.5	6.0	5.5	9.0	7.0	11.0	9.0
24	13.5	10.5	9.0	7.5	8.5	7.5	6.0	5.0	9.5	8.0	10.0	8.5
25	11.5	10.5	10.0	8.5	8.0	7.0	6.5	5.5	9.0	7.5	12.5	8.5
26	10.5	9.0	9.0	8.0	7.5	6.5	7.5	6.5	8.5	7.0	12.5	9.5
27	9.5	8.0	8.5	8.0	7.0	6.0	7.0	6.0	8.0	5.5	12.5	9.0
28	9.0	7.5	8.5	8.0	7.5	6.5	7.5	6.5	7.0	4.0	12.0	10.0
29	9.5	8.0	9.5	8.5	8.0	7.5	7.5	7.0	---	---	12.0	10.5
30	9.0	8.5	9.0	8.5	7.5	7.0	7.0	6.0	---	---	12.5	10.5
31	8.5	8.0	---	---	7.0	5.0	7.0	6.0	---	---	11.5	9.5
MONTH	15.0	7.5	10.0	2.5	11.0	5.0	9.0	4.0	9.5	4.0	12.5	3.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.0	8.5	11.0	8.5	18.0	12.0	18.5	16.0	25.0	17.0	22.0	15.5
2	10.0	7.5	11.0	8.0	19.0	13.0	17.0	15.0	26.0	17.5	22.0	17.5
3	11.0	7.0	10.5	8.5	19.5	14.0	15.0	14.0	26.5	18.5	19.5	17.0
4	10.5	8.5	10.0	7.5	21.0	15.0	16.0	13.5	24.5	19.5	16.5	15.0
5	10.0	7.5	10.5	7.0	22.0	16.0	20.5	13.5	25.5	17.0	15.0	14.0
6	9.5	6.5	13.0	6.5	21.0	16.0	21.5	15.5	26.0	17.0	16.5	14.0
7	10.0	6.5	14.0	8.5	20.0	15.0	22.0	17.0	28.0	19.0	17.0	14.0
8	11.0	7.0	14.5	9.0	20.5	15.0	18.5	16.5	28.5	20.5	16.0	13.0
9	12.5	7.0	13.0	11.0	18.0	15.0	17.5	14.5	28.0	20.0	15.5	13.5
10	14.0	8.5	10.5	9.5	15.0	12.5	20.0	14.0	26.5	18.5	15.0	12.5
11	13.0	9.5	11.0	9.0	18.5	11.5	21.0	14.0	25.0	20.0	15.5	12.5
12	12.0	7.5	10.0	8.0	16.0	14.0	23.0	15.0	20.5	18.5	16.0	12.0
13	10.0	8.0	10.0	9.0	16.0	13.0	24.5	17.0	20.5	17.0	15.0	13.5
14	10.0	8.0	10.5	9.5	15.5	12.5	26.0	18.5	23.0	15.5	16.5	13.0
15	9.0	8.0	10.5	8.5	15.5	12.0	22.0	18.5	20.0	17.0	16.0	13.5
16	10.0	7.0	10.5	8.5	17.5	13.0	22.0	17.0	17.5	15.5	15.0	12.0
17	9.5	6.5	12.0	8.0	19.5	12.5	22.0	16.5	18.5	14.5	14.0	12.0
18	12.0	8.0	14.0	8.5	16.5	14.0	22.5	16.5	21.0	14.0	14.5	11.5
19	10.5	8.5	14.5	10.0	19.0	13.0	24.5	16.0	19.0	17.0	15.5	11.5
20	9.5	7.0	16.5	11.0	18.0	15.0	25.5	18.0	19.0	16.5	15.5	12.0
21	9.0	7.0	14.0	10.0	16.5	14.5	26.5	18.0	17.0	16.0	16.5	13.5
22	8.5	7.0	11.5	8.5	17.0	13.5	26.5	19.5	17.0	15.0	15.0	12.5
23	9.5	6.5	11.5	8.5	16.0	14.0	28.0	20.5	17.5	14.5	17.5	12.5
24	11.0	8.0	11.0	9.0	16.0	13.0	27.5	19.5	16.5	15.0	18.0	13.5
25	10.0	9.0	12.0	8.5	15.0	13.5	28.0	19.5	17.0	13.5	18.0	14.0
26	9.5	8.5	11.0	10.0	19.5	13.5	25.0	21.0	19.0	13.0	19.0	14.0
27	9.5	8.0	12.5	10.0	22.5	14.5	24.0	18.0	20.5	14.5	19.0	15.5
28	11.0	8.5	12.0	10.0	22.0	17.0	22.5	17.0	22.5	15.5	18.0	13.5
29	12.0	8.0	14.5	9.0	18.5	16.5	25.5	16.5	23.5	17.0	18.0	12.5
30	10.0	8.5	15.0	9.0	20.5	16.0	26.0	18.0	20.0	18.0	16.0	14.0
31	---	---	16.5	10.0	---	---	25.5	17.5	19.0	17.0	---	---
MONTH	14.0	6.5	16.5	6.5	22.5	11.5	28.0	13.5	28.5	13.0	22.0	11.5

14173500 CALAPOOIA RIVER AT ALBANY, OR

LOCATION.--Lat 44°37'15", long 123°07'40", in NW¼ sec.13, T.11 S., R.4 W., Linn County, Hydrologic Unit 17090003, near right bank on downstream side of bridge on Riverside Drive at Albany, 0.6 mi (1.0 km) downstream from Oak Creek, and at mile 3.0 (4.8 km).

DRAINAGE AREA.--372 mi^2 (963 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year. Prior to October 1963, published as Calapooya River at Albany.

REVISED RECORDS.--WSP 1218: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 180.85 ft (55.123 m) National Geodetic Vertical Datum of 1929. Prior to May 11, 1962, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records excellent. Higher flows are affected by backwater from Willamette River at times. Diurnal fluctuation caused by ponds at flour mills near Shedd. Diversions for irrigation above station.

AVERAGE DISCHARGE.--38 years, 911 ft^3/s (25.80 m^3/s), 33.26 in/yr (845 mm/yr), 660,000 acre-ft/yr (814 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 32,700 ft^3/s (926 m^3/s) Dec. 22, 1955, gage height, 22.12 ft (6.742 m); maximum gage height, 25.5 ft (7.77 m) Jan. 2, 1943, from graph based on gage readings (backwater from Willamette River); minimum discharge, 3.5 ft^3/s (0.099 m^3/s) Sept. 7, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,000 ft^3/s (396 m^3/s) Dec. 15, gage height, 19.12 ft (5.828 m); minimum, 8.9 ft^3/s (0.25 m^3/s) Aug. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	454	1760	1040	1220	443	255	795	294	105	51	57
2	102	496	1630	852	3140	417	255	702	269	103	37	66
3	91	658	3410	1310	3450	395	411	611	246	134	40	60
4	93	447	3650	3060	3100	379	449	545	237	117	40	60
5	71	329	2690	2430	2110	400	443	530	215	126	27	55
6	70	382	1910	6120	1890	395	604	479	197	115	17	75
7	75	426	2500	6470	1840	374	573	425	188	109	20	109
8	74	382	2880	4420	2780	414	467	392	177	105	45	120
9	90	332	2010	3080	1970	504	420	363	171	82	23	139
10	88	279	1990	2160	1470	482	376	384	169	95	32	192
11	85	242	2490	1620	1180	423	368	387	197	90	30	338
12	69	217	4140	1820	1010	437	346	591	218	79	32	341
13	69	212	5320	1880	935	440	321	653	197	84	19	272
14	59	266	8490	2310	815	420	324	712	197	84	12	230
15	62	540	13200	1790	857	398	479	1540	186	62	64	173
16	51	1100	12000	1880	899	379	604	1760	192	66	49	158
17	54	835	9470	2680	785	361	560	1340	177	66	65	146
18	65	600	7570	2510	746	346	630	957	165	92	102	138
19	56	469	5160	2510	667	329	647	756	163	74	77	158
20	50	388	3060	1920	607	321	772	637	156	72	71	124
21	51	332	2090	1690	576	289	716	545	141	62	61	121
22	48	382	1680	2560	560	284	1080	476	139	59	68	123
23	41	1880	1550	2180	517	292	2040	449	136	37	85	115
24	46	2070	1840	1540	501	406	1280	403	133	46	123	105
25	69	3540	2480	1260	513	384	946	398	148	62	114	82
26	96	5190	2020	1220	498	338	1400	379	126	45	152	99
27	228	6630	1430	1070	551	321	2600	376	138	43	143	90
28	182	4350	1190	961	494	292	1710	400	121	40	102	83
29	144	2570	1100	1030	---	272	1210	400	114	43	106	87
30	135	2350	1560	874	---	267	957	358	115	24	70	77
31	274	---	1390	829	---	262	---	318	---	35	53	---
TOTAL	2804	38348	113660	67076	35681	11464	23243	19061	5322	2356	1930	3993
MEAN	90.5	1278	3666	2164	1274	370	775	615	177	76.0	62.3	133
MAX	274	6630	13200	6470	3450	504	2600	1760	294	134	152	341
MIN	41	212	1100	829	494	262	255	318	114	24	12	55
CFSM	.24	3.44	9.86	5.82	3.43	1.00	2.08	1.65	.48	.20	.17	.36
IN.	.28	3.83	11.37	6.71	3.57	1.15	2.32	1.91	.53	.24	.19	.40
AC-FT	5560	76060	225400	133000	70770	22740	46100	37810	10560	4670	3830	7920

CAL YR 1977 TOTAL 237914 MEAN 652 MAX 13200 MIN 11 CFSM 1.75 IN 23.79 AC-FT 471900
WTR YR 1978 TOTAL 324938 MEAN 890 MAX 13200 MIN 12 CFSM 2.39 IN 32.49 AC-FT 644500

14173500 CALAPOOIA RIVER AT ALBANY, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: January 1964 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: Maximum, 28.5°C Aug. 16, 17, 19-21, 1967, Aug. 9, 1978; minimum, 0.0°C sometime during period Jan. 7 to Feb. 18, 1969, Dec. 16-18, 1972, Jan. 6-12, 1974, Jan. 8-10, 1977.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum recorded, 28.5°C Aug. 9; minimum, 1.5°C Nov. 22.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.0	13.5	10.5	10.0	9.5	9.5	6.5	4.5	7.5	7.5	8.0	7.0
2	14.5	12.5	11.0	10.0	10.5	9.5	4.5	4.0	7.5	7.5	7.5	6.0
3	14.0	12.5	10.0	8.5	10.5	10.0	4.0	3.5	8.5	7.5	7.0	6.0
4	14.0	12.0	8.0	6.5	10.0	9.5	5.5	3.5	9.0	8.5	7.5	6.5
5	14.0	12.5	7.5	6.5	9.5	8.5	7.0	5.5	9.0	8.5	8.5	7.0
6	13.5	13.0	8.0	7.0	8.5	8.5	7.0	7.0	9.0	9.0	9.0	7.5
7	13.5	12.5	9.0	8.0	9.0	8.0	7.5	7.0	9.0	9.0	9.5	8.5
8	14.0	12.5	8.5	7.5	8.0	6.5	8.0	7.5	9.0	8.0	10.5	9.5
9	14.5	13.0	7.5	7.0	7.0	6.5	8.0	8.0	8.0	7.5	10.5	9.5
10	14.0	12.5	7.5	6.5	7.5	6.5	8.0	8.0	7.5	6.0	10.5	9.0
11	14.0	12.0	7.5	7.0	9.0	8.0	8.0	8.0	6.0	5.5	10.0	9.0
12	13.5	12.0	8.0	7.5	9.5	9.0	8.0	7.5	5.5	5.0	9.5	8.0
13	15.0	13.5	8.5	8.0	11.0	9.0	8.0	7.5	5.5	5.0	9.5	8.0
14	14.5	13.0	9.5	8.5	11.5	11.0	7.5	7.5	6.5	5.5	10.0	8.0
15	14.5	13.0	10.0	9.0	11.0	8.0	8.0	7.5	7.0	6.5	9.5	7.5
16	15.0	13.0	9.5	8.5	8.0	7.0	8.0	8.0	7.0	6.5	9.5	7.5
17	14.0	12.5	8.5	7.5	7.5	7.0	8.5	8.0	7.0	6.5	10.5	7.5
18	13.5	12.5	7.0	6.0	7.5	7.0	8.5	8.0	8.5	7.0	12.0	9.0
19	14.0	12.5	6.0	4.5	7.0	6.0	8.0	7.5	9.0	8.5	13.0	10.5
20	13.0	12.0	4.5	3.0	6.0	5.5	8.5	8.0	9.0	8.5	13.5	11.0
21	13.5	12.0	3.0	2.5	6.0	5.5	9.5	9.0	9.0	9.0	13.0	11.5
22	13.0	12.0	2.5	1.5	7.0	6.5	9.0	7.5	9.0	9.0	12.5	12.0
23	14.0	12.5	5.5	2.5	7.0	6.5	7.5	6.5	9.5	9.0	12.5	12.0
24	14.0	13.0	8.0	5.5	8.0	7.0	6.5	6.0	10.0	9.0	12.0	11.0
25	13.5	13.0	11.0	8.0	8.5	7.5	6.0	6.0	10.5	9.5	13.0	11.0
26	13.0	12.5	11.0	10.5	7.5	7.0	6.5	6.0	10.0	9.5	14.0	11.5
27	12.0	11.5	10.0	9.5	6.5	6.0	7.0	6.5	10.0	9.0	14.5	12.5
28	11.5	11.0	9.5	9.0	6.0	6.0	7.5	7.0	9.5	8.0	14.0	13.0
29	11.0	10.5	9.5	9.0	6.5	6.0	7.5	7.0	---	---	13.5	12.5
30	11.0	10.0	9.5	9.5	6.5	6.5	7.5	7.5	---	---	13.5	13.0
31	10.5	10.0	---	---	7.0	6.5	7.5	7.0	---	---	13.5	12.0
MONTH	15.0	10.0	11.0	1.5	11.5	5.5	9.5	3.5	10.5	5.0	14.5	6.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.5	11.5	12.5	12.0	20.0	16.0	21.5	20.0	25.0	22.0	21.5	19.0
2	12.0	11.0	13.0	11.5	21.0	17.5	20.0	19.0	25.5	22.0	21.5	20.0
3	12.0	10.5	13.5	11.5	22.0	19.0	19.5	18.0	26.5	22.5	21.0	19.0
4	12.5	11.0	13.0	11.5	23.0	20.5	19.0	17.5	26.0	23.0	19.0	18.0
5	12.0	11.0	12.5	11.0	24.5	21.5	20.5	17.0	26.0	22.0	18.5	17.5
6	11.5	10.5	14.0	11.0	24.5	22.0	22.5	18.5	26.5	22.0	19.0	17.5
7	11.5	9.5	15.5	11.5	23.5	21.5	23.5	19.5	27.5	23.0	18.5	17.0
8	12.5	9.5	17.0	13.0	23.5	21.0	22.5	20.5	28.0	24.5	17.5	16.5
9	13.5	10.5	16.0	14.5	22.5	21.0	21.5	20.0	28.5	24.5	17.5	16.5
10	14.5	11.0	15.0	14.0	20.5	19.0	20.5	18.5	27.0	23.5	18.0	16.0
11	15.0	12.0	14.5	13.0	21.0	18.0	21.0	18.5	25.0	23.5	17.0	15.5
12	15.0	12.0	13.5	12.0	20.0	18.5	22.0	18.5	23.5	21.5	17.5	15.0
13	13.5	12.0	12.0	12.0	19.5	18.0	24.0	20.0	22.0	20.0	16.5	15.5
14	12.5	11.5	12.0	12.0	18.5	17.5	25.5	21.5	23.0	20.0	17.0	15.5
15	12.0	11.0	12.5	11.5	18.5	17.5	24.5	21.0	22.5	20.5	18.0	16.0
16	11.5	10.0	12.5	11.5	19.0	17.0	22.0	20.5	21.0	20.0	17.5	15.5
17	11.0	10.0	13.0	11.5	21.0	17.0	23.0	20.0	21.5	19.0	16.0	15.0
18	11.5	10.0	14.5	12.0	20.0	18.0	23.0	20.0	21.5	19.0	16.5	14.5
19	12.5	11.0	16.5	13.5	21.0	17.5	24.5	20.5	21.0	19.5	16.0	14.5
20	12.5	11.5	18.5	15.5	21.5	18.5	25.5	22.0	20.0	19.0	16.0	14.0
21	12.0	11.0	17.0	16.0	20.0	19.5	26.5	22.5	19.0	18.5	17.0	14.5
22	11.0	10.0	16.0	14.0	20.0	18.0	27.0	23.5	19.0	18.0	16.0	15.0
23	10.0	9.5	14.0	12.5	19.0	18.0	28.0	24.0	18.5	18.0	17.5	15.0
24	11.5	9.5	13.5	12.0	19.0	17.5	27.5	23.5	19.0	18.0	18.5	16.0
25	12.0	11.0	14.5	12.5	18.5	17.5	27.5	24.0	19.0	17.5	18.5	17.0
26	12.0	11.5	14.0	13.0	21.0	17.0	26.5	24.0	20.0	17.0	19.0	17.5
27	11.5	11.5	15.0	13.0	22.5	18.5	24.0	22.0	20.5	18.0	19.0	17.5
28	12.5	11.5	15.0	13.0	24.0	20.5	23.5	21.5	22.0	18.5	19.0	17.0
29	13.5	11.5	16.5	13.5	22.5	21.0	25.0	21.0	22.5	19.5	19.0	16.5
30	13.0	12.0	17.5	13.5	22.0	20.0	26.5	22.0	22.0	20.5	18.5	17.0
31	---	---	18.5	14.5	---	---	25.5	22.0	21.0	20.5	---	---
MONTH	15.0	9.5	18.5	11.0	24.5	16.0	28.0	17.0	28.5	17.0	21.5	14.0

14174000 WILLAMETTE RIVER AT ALBANY, OR

LOCATION.--Lat 44°38'20", long 123°06'20", in SW¼ sec.6, T.11 S., R.3 W., Linn County, Hydrologic Unit 17090003, on right bank 5 ft (1.5 m) upstream from bridge on U.S. Highway 20 (Ellsworth Street) in Albany, 0.2 mi (0.3 km) downstream from Calapooia River, and at mile 119.31 (191.97 km).

DRAINAGE AREA.--4,840 mi^2 (12,500 km^2), approximately.

PERIOD OF RECORD.--November 1878 to April 1888 (fragmentary), January to June 1892, November 1892 to September 1894, December 1894 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 694: Drainage area. WSP 904: 1939. WSP 964: 1881, 1890, 1894, 1897, 1901, 1903, 1908, 1910, 1916, 1923, 1927, 1932(M). WSP 984: 1916. WSP 1248: 1895, 1902, 1907, 1915(M), 1917(M), 1918-19, 1934(M). WSP 1318 (monthly and annual figures only): 1894, 1897, 1901-3, 1907-8, 1910, 1916, 1918-19, 1923, 1927.

GAGE.--Water-stage recorder. Datum of gage is 167.18 ft (50.956 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 27, 1906, nonrecording gage at site 0.2 mi (0.3 km) upstream at datum 5.00 ft (1.524 m) higher. Sept. 27, 1906, to Nov. 12, 1934, nonrecording gage at site 300 ft (91 m) upstream at datum 5.00 ft (1.524 m) higher. Nov. 14, 1934, to Sept. 30, 1962, at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records excellent. Flow regulated by nine reservoirs above station (see elsewhere in this report). Albany power canal diverts water from South Santiam River at Lebanon and discharges into Calapooia River near mouth; small diversions for irrigation and municipal water supply.

AVERAGE DISCHARGE.--84 years (water years 1894, 1896-78), 14,510 ft^3/s (410.9 m^3/s), 40.71 in/yr (1,034 mm/yr), 10,510,000 acre-ft/yr (13.0 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 266,000 ft^3/s (7,530 m^3/s) Jan. 14, 1881, gage height, 37.8 ft (11.52 m), present datum; minimum, 1,840 ft^3/s (52.1 m^3/s) Sept. 1, 2, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 4, 1861, reached a stage of 41.0 ft (12.50 m), discharge, 340,000 ft^3/s (9,630 m^3/s), from rating curve extended above 220,000 ft^3/s (6,230 m^3/s). Flood of Feb. 4, 1890, reached a stage of 38.9 ft (11.86 m), discharge, 291,000 ft^3/s (8,240 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 87,700 ft^3/s (2,480 m^3/s) Dec. 16, gage height, 24.92 ft (7.596 m); minimum, 3,730 ft^3/s (106 m^3/s) July 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8320	10200	43700	33400	12500	7880	5890	9680	5800	4310	4440	5850
2	7550	11600	44700	29800	17600	7470	5920	8900	5650	4140	4370	6030
3	7190	13200	49300	27900	23100	7260	6550	8340	5510	4330	4400	5820
4	6880	12600	46300	32500	34400	7190	6730	7900	5320	4370	4420	5870
5	6620	12300	47700	32700	31200	7240	6840	7570	5190	4360	4450	6110
6	7210	12100	46800	46900	27700	7150	7730	7280	5040	4140	4510	6380
7	8060	11100	46500	50000	24800	7110	7690	7050	4970	3870	4540	6900
8	8240	10400	49100	42200	26500	7190	7190	6770	4840	3760	4580	7420
9	8540	9390	46100	36700	25300	7460	6710	6500	4750	3980	4400	7790
10	8320	8600	43800	32500	23300	7440	6360	6480	4840	3950	4330	8220
11	8280	7510	44200	28300	20900	7220	6170	6500	5290	3860	4810	9590
12	8360	7650	48700	26400	18200	7190	5940	7170	5370	3840	5250	10400
13	8200	8700	53700	26200	16900	7150	5850	7380	5170	3920	5410	10900
14	7880	9840	63200	27000	14400	7190	5900	7820	5190	3990	5560	10700
15	7630	13200	77800	25800	11900	7070	6220	9680	5100	3950	5420	10700
16	7980	19600	86300	25800	11900	6790	6550	12000	5150	4140	5510	10500
17	7300	19600	81200	28400	11200	6610	6700	11900	5000	4370	5490	9960
18	7150	17500	71400	32400	10700	6450	6940	10500	4890	4390	5660	9410
19	7300	16000	63900	33400	10400	6320	7110	9250	4800	4080	5390	9010
20	7030	14500	60800	31200	9960	6240	7190	8400	4720	3890	5420	8400
21	6450	13300	56700	28500	9570	6150	7190	7770	4690	3770	5470	8600
22	5990	13500	53200	30400	9300	6080	8640	7190	4700	3770	5630	9120
23	5770	22500	51600	31300	9230	6170	12900	6920	4650	3810	5700	9080
24	5650	34600	51000	28200	9160	6960	12400	6640	4540	3920	5750	8850
25	5990	43200	53200	24300	8940	7000	10400	6610	4590	3890	5970	8770
26	6840	51800	52200	22100	8520	6620	10600	6480	4610	3900	6310	8680
27	7460	55000	48100	20300	8620	6340	16100	6380	4530	4080	6010	8660
28	7510	44600	44500	18700	8340	6180	14200	6570	4470	4330	5800	8790
29	8040	45700	41600	16100	---	6040	11700	6550	4360	4480	5660	8790
30	8120	46400	39100	14700	---	5970	10500	6240	4420	4510	5560	8740
31	9230	---	38300	13100	---	5920	---	6030	---	4510	5590	---
TOTAL	231090	616190	1644700	897200	454540	211050	246810	240450	148150	126610	161810	254040
MEAN	7455	20540	53050	28940	16230	6808	8227	7756	4938	4084	5220	8468
MAX	9230	55000	86300	50000	34400	7880	16100	12000	5800	4510	6310	10900
MIN	5650	7510	38300	13100	8340	5920	5850	6030	4360	3760	4330	5820
CFSM	1.54	4.24	11.0	5.98	3.35	1.41	1.70	1.60	1.02	.84	1.08	1.75
IN.	1.78	4.74	12.64	6.90	3.49	1.62	1.90	1.85	1.14	.97	1.24	1.95
AC-FT	458400	1222000	3262000	1780000	901600	418600	489500	476900	293900	251100	321000	503900

CAL YR 1977 TOTAL 4003850 MEAN 10970 MAX 86300 MIN 2570 CFSM 2.27 IN 30.77 AC-FT 7942000
WTR YR 1978 TOTAL 5232640 MEAN 14340 MAX 86300 MIN 3760 CFSM 2.96 IN 40.22 AC-FT 10380000

14178000 NORTH SANTIAM RIVER BELOW BOULDER CREEK, NEAR DETROIT, OR

LOCATION.--Lat 44°42'25", long 122°06'00", in SE¼NW¼ sec.17, T.10 S., R.6 E., Marion County, Hydrologic Unit 17090005, on right bank 0.5 mi (0.8 km) downstream from Boulder Creek, 3.0 mi (4.8 km) southeast of Detroit, and at mile 70.7 (113.8 km).

DRAINAGE AREA.--216 mi^2 (559 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1907 to October 1909, October 1928 to current year. Monthly discharge only January 1907, published in WSP 1318. Prior to October 1952, published as "at Detroit."

REVISED RECORDS.--WSP 814: Drainage area at former site. WSP 1248: 1931.

GAGE.--Water-stage recorder. Datum of gage is 1,590.07 ft (484.653 m) National Geodetic Vertical Datum of 1929. See WSP 1738 for history of changes prior to Oct. 1, 1952.

REMARKS.--Water-discharge records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--52 years, 1,012 ft^3/s (28.66 m^3/s), 63.62 in/yr (1,616 mm/yr), 733,200 acre-ft/yr (904 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft^3/s (756 m^3/s) Dec. 22, 1964, gage height, 13.76 ft (4.194 m), temporary backwater from debris, from rating curve extended above 6,600 ft^3/s (187 m^3/s) on basis of slope-area measurement of peak flow; minimum, 250 ft^3/s (7.08 m^3/s) Sept. 13, 1909.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,700 ft^3/s (105 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	1930	13,400	379	10.26	3.127	Dec. 2	2230	5,470	155	7.32	2.231
Nov. 29	0730	4,020	114	6.65	2.027	Dec. 13	1800	*13,700	388	*10.35	3.155

Minimum, 349 ft^3/s (9.88 m^3/s) Oct. 21-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	485	938	2320	1060	1110	867	785	1160	742	577	411	415
2	449	1490	3650	1030	1370	829	793	1050	749	595	411	411
3	424	1050	4250	1170	1830	807	770	980	742	589	415	425
4	406	856	3330	1360	1700	800	749	947	735	571	425	420
5	392	810	2580	1430	1650	785	763	898	735	542	415	450
6	406	740	3120	1650	1710	770	735	852	727	542	406	465
7	515	733	3180	1540	1710	770	707	815	700	542	406	450
8	474	684	2330	1530	1670	852	680	785	673	519	415	455
9	444	638	2060	1570	1540	930	667	800	680	497	411	491
10	420	602	2020	1660	1390	875	680	860	714	486	401	602
11	406	581	3220	1560	1290	844	693	997	714	486	396	693
12	397	567	3750	1640	1190	815	667	1010	660	481	415	602
13	388	661	9860	1640	1100	800	653	1150	647	475	460	542
14	383	1070	9120	1650	1040	778	647	1330	653	481	420	530
15	379	1850	7150	1610	997	742	640	1530	735	524	460	502
16	374	1520	4520	1570	938	727	660	1450	653	559	486	481
17	370	1200	3300	1630	914	721	660	1300	627	513	465	513
18	362	1030	2580	1620	890	735	660	1190	608	491	430	559
19	362	904	2100	1650	867	749	660	1130	589	481	415	524
20	357	810	1790	1540	867	756	680	1110	577	470	445	502
21	353	761	1620	1580	875	770	700	1060	571	460	465	486
22	353	810	1490	1540	883	778	770	980	559	460	481	470
23	370	904	1450	1400	898	883	778	914	536	460	470	460
24	374	1600	1590	1300	914	922	800	875	536	460	508	455
25	527	8950	1610	1240	947	867	890	844	547	455	547	445
26	574	6950	1480	1190	1010	844	1730	807	536	475	481	440
27	485	3860	1370	1110	955	844	1770	829	519	465	450	435
28	454	3010	1290	1110	906	829	1560	867	519	435	430	425
29	479	3430	1260	1100	---	815	1380	815	524	430	425	420
30	796	2690	1230	1040	---	822	1270	770	530	420	425	415
31	825	---	1150	1020	---	807	---	742	---	420	435	---
TOTAL	13783	51699	91770	43740	33161	25133	25597	30847	19037	15361	13625	14483
MEAN	445	1723	2960	1411	1184	811	853	995	635	496	440	483
MAX	825	8950	9860	1660	1830	930	1770	1530	749	595	547	693
MIN	353	567	1150	1020	867	721	640	742	519	420	396	411
CFSM	2.06	7.98	13.7	6.53	5.48	3.76	3.95	4.61	2.94	2.30	2.04	2.24
IN.	2.37	8.90	15.80	7.53	5.71	4.33	4.41	5.31	3.28	2.65	2.35	2.49
AC-FT	27340	102500	182000	86760	65770	49850	50770	61190	37760	30470	27030	28730

CAL YR 1977 TOTAL 323147 MEAN 885 MAX 9860 MIN 325 CFSM 4.10 IN 55.65 AC-FT 641000
WTR YR 1978 TOTAL 378236 MEAN 1036 MAX 9860 MIN 353 CFSM 4.80 IN 65.14 AC-FT 750200

14178000 NORTH SANTIAM RIVER BELOW BOULDER CREEK, NEAR DETROIT, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: April 1951 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: Maximum, 19.0°C July 8, 18, 19, 1970; minimum, 0.0°C Dec. 1, 1954, Mar. 5, Feb. 16, 17, 1956, Jan. 4-11, 1974, Jan. 5, 6, 8, 9, 1977.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum, 18.0°C Aug. 6; minimum recorded, 1.5°C Jan. 1, 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)
DEC				
02...	1400	3350	185	1670
08...	1000	2430	41	269
JAN				
27...	1025	1080	6	17
MAR				
16...	1000	731	4	7.9
APR				
21...	1000	689	4	7.4
JUN				
14...	1000	649	1	1.8
JUL				
20...	0935	473	1	1.3

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.5	7.5	7.0	6.0	---	---	2.0	1.5	4.0	3.5	4.5	2.5
2	9.0	6.5	7.0	5.5	6.0	5.5	3.0	1.5	4.5	3.5	4.5	2.5
3	9.0	6.5	6.0	4.5	6.0	5.5	4.0	3.0	5.0	4.0	4.5	3.0
4	8.5	6.0	5.5	4.0	6.0	5.0	4.0	3.5	5.5	4.0	5.0	4.0
5	9.0	6.5	6.0	5.0	5.0	4.5	4.5	3.5	5.5	4.5	5.5	4.0
6	8.0	6.5	6.5	5.0	5.5	5.0	4.5	3.5	5.0	4.5	6.0	4.5
7	9.0	7.5	6.0	5.0	5.0	4.0	4.5	4.0	5.0	4.5	6.0	5.0
8	8.5	6.5	5.0	4.0	3.5	3.5	5.0	4.0	4.5	4.0	6.0	5.5
9	8.5	6.5	5.5	4.0	4.0	3.0	5.0	4.5	4.5	4.0	6.5	5.0
10	8.0	5.5	6.0	4.0	5.0	4.0	5.0	4.5	4.5	3.0	6.0	4.0
11	8.5	6.0	---	---	5.0	4.5	5.0	4.0	4.0	3.0	5.5	4.5
12	9.0	6.5	---	---	5.0	4.5	5.0	4.0	3.5	2.0	5.0	3.5
13	9.5	8.0	---	---	6.0	5.0	5.0	4.5	4.0	2.5	5.0	3.5
14	9.0	7.0	---	---	6.0	5.5	5.0	4.5	4.5	3.0	5.5	3.5
15	9.0	7.5	---	---	5.5	4.0	5.0	4.5	4.5	3.5	5.5	2.5
16	9.5	7.5	---	---	4.0	4.0	5.0	4.5	3.5	3.0	6.5	3.0
17	8.5	7.0	---	---	4.5	4.0	5.0	4.5	5.0	3.0	7.0	4.0
18	8.5	6.5	---	---	4.0	3.5	4.5	4.0	5.5	4.0	7.0	4.5
19	9.5	7.5	---	---	3.5	3.0	5.0	4.0	5.5	3.5	7.0	4.0
20	7.5	6.0	---	---	3.5	2.5	5.5	4.5	5.5	3.5	7.5	4.5
21	8.5	6.5	---	---	4.0	3.0	5.0	4.0	5.5	4.0	7.0	4.5
22	8.0	5.5	---	---	4.0	3.0	4.0	3.5	5.5	3.5	7.5	5.0
23	8.5	7.0	---	---	4.5	3.5	3.5	3.0	6.0	4.0	6.5	5.5
24	9.0	7.5	---	---	4.5	4.0	3.5	2.5	6.0	5.0	6.5	5.0
25	9.0	7.5	---	---	4.5	4.0	4.0	3.0	5.5	4.5	8.0	5.5
26	8.0	6.5	---	---	4.0	3.5	4.5	3.5	5.5	4.5	8.5	5.0
27	7.0	5.0	---	---	4.0	3.0	4.5	3.0	5.0	4.0	8.5	5.5
28	7.5	6.0	---	---	4.0	3.0	5.0	4.0	4.5	3.0	8.0	5.5
29	7.5	6.5	---	---	4.5	3.5	5.0	3.5	---	---	8.0	5.5
30	7.0	6.0	---	---	4.5	3.5	4.5	3.5	---	---	7.0	6.5
31	6.5	5.5	---	---	4.0	2.0	4.0	3.5	---	---	8.5	6.0
MONTH	9.5	5.0	7.0	4.0	6.0	2.0	5.5	1.5	6.0	2.0	8.5	2.5

14178000 NORTH SANTIAM RIVER BELOW BOULDER CREEK, NEAR DETROIT, OR --Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	5.5	8.5	6.0	13.0	7.5	12.0	10.5	16.0	10.5	14.0	10.0
2	5.5	4.0	8.0	5.5	13.5	8.0	13.0	10.0	16.5	11.0	14.0	10.5
3	7.0	3.5	8.0	5.5	13.5	8.5	10.5	9.5	17.5	12.5	13.0	11.5
4	6.0	5.0	6.0	5.0	14.0	9.0	13.0	9.0	17.5	13.0	11.0	10.0
5	6.0	4.0	7.5	4.0	14.5	9.5	14.5	9.0	16.5	11.5	11.0	10.0
6	6.5	4.0	8.5	4.0	13.5	9.5	15.5	9.5	17.0	11.5	10.5	10.0
7	7.0	4.5	10.5	5.0	14.0	9.5	16.0	11.0	17.5	12.5	10.5	9.5
8	8.0	4.5	11.0	6.0	14.5	9.5	16.0	11.5	18.0	12.5	10.5	8.5
9	8.5	4.0	9.0	7.5	12.0	10.0	14.5	10.0	17.0	12.5	11.0	10.0
10	9.5	5.5	8.0	6.5	10.0	8.5	14.5	10.0	16.0	12.0	11.0	9.5
11	8.5	5.5	7.0	6.0	13.5	8.5	15.0	9.5	16.0	12.5	11.5	9.0
12	8.0	3.5	7.5	5.5	11.0	9.0	15.5	9.5	14.0	12.0	12.0	9.0
13	6.0	4.0	8.0	6.5	10.5	8.5	16.0	11.0	13.0	10.5	10.0	9.0
14	7.0	5.0	8.0	6.5	10.5	8.5	16.5	11.5	15.0	10.5	12.0	9.0
15	7.0	5.5	7.5	6.0	10.5	7.5	15.0	12.0	13.0	11.5	11.5	9.5
16	6.5	4.0	8.5	5.5	13.0	7.5	12.5	11.0	11.5	10.5	10.0	8.0
17	6.5	3.5	10.0	6.0	14.0	8.0	15.5	10.5	11.5	9.5	9.0	7.5
18	7.5	5.0	11.0	6.0	13.5	9.5	15.5	10.5	14.0	9.5	8.0	6.5
19	7.0	6.0	11.5	7.0	15.0	9.5	16.0	10.0	12.5	10.5	10.0	7.0
20	7.0	4.5	12.0	8.0	15.5	10.0	16.0	11.0	12.0	10.5	10.0	7.0
21	6.0	4.0	9.5	7.0	15.5	11.0	16.5	10.5	11.0	10.0	10.5	8.0
22	5.0	4.0	8.5	6.0	15.0	10.0	16.5	11.0	11.5	10.0	9.5	8.0
23	7.0	3.0	9.5	6.0	12.0	10.5	17.5	12.5	11.5	9.5	11.0	8.0
24	9.0	5.0	8.0	6.0	11.0	9.5	17.0	12.0	11.0	10.0	11.5	8.0
25	7.5	6.0	9.0	6.0	10.5	9.0	17.5	12.0	12.0	9.5	11.0	8.5
26	6.5	6.0	8.5	7.0	14.5	9.0	16.5	13.5	13.0	9.0	12.0	8.5
27	6.5	5.5	9.0	7.0	15.5	9.0	16.0	11.0	13.5	9.0	11.5	9.5
28	7.5	5.5	10.0	7.5	12.5	9.5	16.0	11.0	14.5	10.0	11.0	8.5
29	9.0	5.5	11.5	6.5	14.0	10.5	16.5	11.0	15.0	10.5	10.5	8.0
30	7.5	5.5	11.5	6.0	15.5	10.5	17.0	11.5	15.0	11.5	10.0	8.0
31	---	---	12.0	6.5	---	---	16.0	11.0	13.0	11.0	---	---
MONTH	9.5	3.0	12.0	4.0	15.5	7.5	17.5	9.0	18.0	9.0	14.0	6.5

14178700 EAST HUMBUG CREEK NEAR DETROIT, OR

LOCATION.--Lat 44°47'57", long 122°03'28", in NW¼NE¼ sec.15, T.9 S., R.6 E., Marion County, Hydrologic Unit 17090005, in Willamette National Forest, on left bank 1.6 mi (2.6 km) upstream from confluence with Humbug Creek, and 6.3 mi (10.1 km) northeast of Detroit.

DRAINAGE AREA.--7.32 mi^2 (19.0 km^2).

PERIOD OF RECORD.--August 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,050 ft (625 m), from topographic map.

REMARKS.--Records poor. No regulation or diversion above station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period August and September, 23 ft^3/s (0.65 m^3/s) Sept. 11, gage height, 2.39 ft (0.728 m); minimum, 2.8 ft^3/s (0.08 m^3/s) Aug. 7-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1											3.6	3.9
2											3.5	3.7
3											3.4	3.6
4											3.4	3.8
5											3.3	5.5
6											3.2	5.6
7											3.1	4.8
8											3.0	5.4
9											2.9	8.9
10											2.9	17
11											2.9	20
12											3.7	14
13											5.3	11
14											3.6	9.5
15											5.6	8.6
16											5.4	7.8
17											5.1	8.9
18											3.9	11
19											3.5	9.9
20											7.8	8.7
21											7.1	8.0
22											6.0	7.5
23											5.3	7.2
24											10	6.7
25											14	6.3
26											8.4	5.8
27											6.5	5.5
28											5.4	5.1
29											4.8	4.9
30											4.3	4.8
31											4.1	---
TOTAL											155.0	233.4
MEAN											5.00	7.78
MAX											14	20
MIN											2.9	3.6
AC-FT											307	463

14179000 BREITENBUSH RIVER ABOVE CANYON CREEK, NEAR DETROIT, OR

LOCATION.--Lat 44°45'10", long 122°07'40", in SE¼NE¼ sec.36, T.9 S., R.5 E., Marion County, Hydrologic Unit 17090005, in Willamette National Forest, on left bank 600 ft (183 m) upstream from Canyon Creek, 1.5 mi (2.4 km) northeast of Detroit, and at mile 2.0 (3.2 km).

DRAINAGE AREA.--106 mi² (275 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1932 to current year. Monthly discharge only June 1932, published in WSP 1318. Prior to October 1952, published as "above French Creek, near Detroit."

REVISED RECORDS.--WSP 1044: 1943(M). WSP 1248: 1947.

GAGE.--Water-stage recorder. Datum of gage is 1,573.95 ft (479.740 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1952, at site 0.2 mi (0.3 km) downstream at datum 13.46 ft (4.103 m) lower.

REMARKS.--Water-discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--46 years, 580 ft³/s (16.43 m³/s), 74.31 in/yr (1,887 mm/yr), 420,200 acre-ft/yr (518 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft³/s (479 m³/s) Dec. 22, 1964, gage height, 14.55 ft (4.435 m); minimum, 87 ft³/s (2.46 m³/s) Sept. 2, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	1800	*13,200	374	*12.83	3.911	Dec. 13	1700	11,700	331	12.09	3.685
Dec. 2	1900	7,270	206	9.64	2.938						

Minimum, 130 ft³/s (3.68 m³/s) Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	310	979	1390	583	657	464	374	567	426	312	157	160
2	263	1440	4380	551	969	431	374	524	450	308	155	155
3	225	835	3460	645	1390	417	357	489	445	296	155	155
4	199	624	2420	990	1140	404	353	464	445	281	152	155
5	184	539	1650	1060	1040	387	387	431	459	266	149	172
6	196	474	1670	1280	1010	370	383	404	474	266	146	184
7	395	494	2060	1040	990	365	361	383	440	270	143	181
8	368	459	1490	1030	983	391	340	378	413	263	143	178
9	288	417	1090	1090	900	395	328	404	435	256	141	199
10	245	368	1160	1090	802	383	340	440	450	242	141	308
11	219	338	2560	997	722	374	357	509	459	235	138	404
12	199	322	2850	1060	657	361	340	509	404	225	146	308
13	184	399	8860	1030	600	361	324	611	387	221	169	259
14	175	1120	7430	1030	567	353	316	867	370	221	155	235
15	163	2280	4860	976	535	336	308	962	387	238	175	218
16	158	1420	2750	927	499	332	316	828	357	277	181	202
17	152	963	1860	983	479	332	316	710	344	238	175	215
18	147	761	1420	990	474	340	324	634	357	221	160	231
19	142	630	1110	1030	474	344	340	628	365	211	155	218
20	139	534	948	955	489	348	348	657	353	202	193	208
21	137	479	841	1000	494	353	378	628	348	196	199	199
22	131	474	758	997	489	365	504	540	344	190	193	190
23	142	572	740	887	489	413	535	479	324	187	193	181
24	144	1610	1000	790	494	440	530	440	300	184	228	175
25	270	9250	1140	722	514	417	600	409	292	178	288	169
26	347	5400	948	680	583	400	941	391	285	181	221	163
27	277	2750	828	634	556	400	927	445	296	178	196	160
28	242	2190	740	628	509	395	802	556	300	172	181	155
29	277	2950	704	617	---	391	704	494	288	166	169	152
30	624	1970	668	589	---	395	628	440	288	163	163	149
31	723	---	634	578	---	391	---	409	---	160	163	---
TOTAL	7665	43041	64419	27459	19505	11848	13435	16630	11285	7004	5323	6038
MEAN	247	1435	2078	886	697	382	448	536	376	226	172	201
MAX	723	9250	8860	1280	1390	464	941	962	474	312	288	404
MIN	131	322	634	551	474	332	308	378	285	160	138	149
CFSM	2.33	13.5	19.6	8.36	6.58	3.60	4.23	5.06	3.55	2.13	1.62	1.90
IN.	2.69	15.10	22.61	9.64	6.85	4.16	4.71	5.84	3.96	2.46	1.87	2.12
AC-FT	15200	85370	127800	54460	38690	23500	26650	32990	22380	13890	10560	11980

CAL YR 1977 TOTAL 201943 MEAN 553 MAX 9250 MIN 107 CFSM 5.22 IN 70.87 AC-FT 400600
WTR YR 1978 TOTAL 233652 MEAN 640 MAX 9250 MIN 131 CFSM 6.04 IN 82.00 AC-FT 463400

14179000 BREITENBUSH RIVER ABOVE CANTON CREEK, NEAR DETROIT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: December 1950 to July 1961, January 1962 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 18.0°C July 27, 1973; minimum, 0.0°C on several days in December 1972, January 1973, January 1977, Nov. 22, 1977, Feb. 1, 2, 1978.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 16.5°C July 23, 24, Aug. 3, 4, 7, 9; minimum, 0.0°C Nov. 22, Feb. 1, 2.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.0	8.0	7.0	6.5	6.0	5.5	2.0	1.5	4.0	.0	4.0	3.0
2	8.5	6.5	6.5	5.5	6.0	6.0	2.0	1.5	4.0	.0	4.0	3.0
3	8.5	6.5	6.0	5.0	6.0	6.0	3.5	2.0	5.0	.5	4.0	3.0
4	8.0	6.5	5.5	4.5	6.0	5.0	4.0	3.5	3.0	1.0	4.0	3.0
5	8.5	7.0	6.5	5.5	5.5	5.0	4.5	4.0	3.5	2.0	5.0	3.5
6	8.0	7.0	6.5	6.0	6.0	5.0	5.0	4.0	3.0	2.0	5.5	4.0
7	8.5	7.5	6.5	5.0	5.5	4.0	5.0	4.5	4.0	2.5	6.0	5.0
8	8.5	7.5	5.0	4.0	4.5	4.0	5.0	4.5	4.5	2.5	6.0	5.0
9	8.5	7.0	6.0	4.5	4.5	4.0	5.0	4.5	4.0	2.0	6.5	5.0
10	8.0	6.0	6.0	5.0	5.0	4.5	5.0	4.5	3.0	1.5	5.5	4.0
11	8.0	6.5	6.5	5.5	5.5	5.0	5.0	4.5	2.5	1.5	5.5	4.5
12	8.5	6.5	6.5	6.0	6.0	5.5	5.0	4.5	3.5	1.0	5.0	4.0
13	9.5	8.0	6.5	6.0	6.5	5.5	5.0	4.5	4.0	1.5	4.5	3.0
14	9.0	7.0	6.5	5.5	7.0	6.0	5.0	4.5	4.0	2.5	5.0	3.5
15	9.0	7.5	6.5	6.0	7.0	6.0	5.0	4.5	4.5	2.5	5.0	2.5
16	9.0	8.0	6.0	5.5	6.0	5.5	5.5	4.5	3.5	2.0	5.5	3.0
17	8.5	7.0	5.5	4.0	5.5	5.0	5.0	5.0	4.5	3.0	6.0	3.5
18	8.0	7.0	4.0	3.5	6.0	5.5	5.0	4.5	5.0	4.0	6.0	4.0
19	9.0	8.0	3.5	2.5	6.0	4.5	5.5	4.5	5.0	4.0	6.5	4.0
20	8.0	6.5	2.5	1.5	4.5	4.0	6.0	5.0	5.5	4.0	6.5	4.0
21	8.0	7.0	2.5	1.0	4.5	4.0	5.5	4.0	5.5	4.5	6.5	4.5
22	7.5	6.0	1.5	.0	4.5	4.0	4.5	4.0	5.5	4.0	7.0	5.0
23	8.5	7.5	3.5	1.5	4.5	4.0	4.0	3.5	6.0	4.0	6.0	5.0
24	8.5	7.5	4.5	3.0	5.0	4.0	4.0	3.0	5.5	5.0	6.0	5.0
25	8.5	7.5	5.0	3.5	5.0	4.5	4.5	3.5	5.5	4.5	7.0	5.0
26	7.5	6.5	5.0	5.0	4.0	3.5	4.5	4.0	5.5	4.5	7.5	5.0
27	6.5	5.5	5.5	5.0	3.5	3.0	4.5	3.5	5.0	4.0	8.0	5.5
28	7.5	6.0	5.5	5.0	4.0	3.0	5.0	4.5	4.5	3.5	8.0	6.0
29	7.5	7.0	6.0	5.5	4.5	3.5	5.0	2.5	---	---	7.5	5.5
30	7.0	6.5	5.5	5.0	4.5	3.5	4.5	1.0	---	---	7.0	6.0
31	6.5	6.0	---	---	4.0	2.0	4.0	3.5	---	---	7.5	5.5
MONTH	9.5	5.5	7.0	.0	7.0	2.0	6.0	1.0	6.0	.0	8.0	2.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	5.0	8.0	5.5	12.5	7.0	11.5	10.0	15.5	10.5	13.5	10.5
2	5.5	4.5	8.0	5.5	12.5	7.0	11.0	9.5	15.5	11.0	14.0	11.0
3	6.5	4.0	7.0	5.5	12.5	7.5	10.0	9.0	16.5	12.0	13.0	11.5
4	6.0	5.0	6.0	5.0	13.0	8.5	12.5	8.5	16.5	13.0	11.5	10.5
5	5.5	4.0	7.5	4.5	13.5	8.5	13.5	8.5	16.0	11.5	10.5	10.0
6	5.5	4.0	8.5	4.5	12.5	9.0	14.0	9.0	16.0	11.0	11.0	10.0
7	6.5	4.0	9.5	5.0	13.0	8.5	15.0	10.0	16.5	12.5	10.5	9.5
8	7.0	4.5	10.5	5.5	13.0	8.5	15.0	10.0	16.0	13.0	10.0	9.0
9	7.5	4.0	8.5	7.0	11.0	8.5	13.5	9.5	16.5	12.5	10.5	9.5
10	8.5	5.0	7.5	6.5	9.0	8.0	13.5	9.5	15.0	12.0	10.0	9.0
11	7.5	5.5	6.5	6.0	12.0	8.0	14.0	9.0	16.0	13.0	10.5	9.0
12	7.5	4.0	7.0	5.5	10.5	8.0	14.5	9.0	14.5	12.0	10.5	8.5
13	6.0	4.0	7.0	6.0	10.0	8.0	15.5	10.0	13.0	11.0	10.0	9.0
14	6.5	5.0	7.0	6.0	9.5	7.5	15.5	11.0	13.5	10.5	11.0	9.0
15	6.5	5.0	6.5	5.5	9.5	7.5	14.5	11.5	13.0	11.0	11.0	9.5
16	6.0	5.0	8.0	5.5	11.5	7.5	12.5	10.5	12.0	10.5	9.5	7.5
17	6.0	4.5	9.0	6.0	13.0	7.5	14.5	9.5	11.5	10.0	9.0	7.5
18	7.5	5.0	10.0	5.5	12.0	8.5	14.5	9.5	13.0	10.0	8.0	7.0
19	6.5	5.5	10.5	7.0	13.5	9.0	15.0	10.0	12.5	10.5	9.5	7.5
20	6.0	5.0	11.5	7.0	14.0	9.0	15.5	10.5	11.5	10.5	9.5	7.0
21	5.5	4.0	8.5	6.5	14.0	9.5	15.5	10.5	11.0	10.0	10.5	8.5
22	4.5	4.0	8.0	6.0	13.5	9.0	15.5	11.0	11.5	10.0	9.5	8.0
23	6.5	4.0	8.5	5.5	11.5	9.5	16.5	12.0	11.0	9.5	11.0	9.5
24	7.5	5.0	8.5	6.0	10.5	8.5	16.5	12.0	10.5	10.0	10.5	8.5
25	6.5	5.5	8.5	6.0	9.5	8.5	16.0	11.5	11.5	9.5	10.5	9.0
26	6.0	5.5	8.0	6.5	13.5	8.5	15.5	13.0	12.0	9.0	11.0	9.0
27	6.5	5.0	8.0	7.0	14.0	8.5	16.0	12.0	12.5	9.0	11.0	10.0
28	7.0	5.5	9.0	7.0	12.0	9.0	16.0	11.5	13.0	9.5	10.5	8.5
29	8.0	5.5	10.5	6.0	12.5	9.5	16.0	11.0	13.5	10.5	10.0	8.0
30	6.5	5.5	10.5	5.5	14.5	10.0	16.0	11.5	14.0	11.0	10.0	8.5
31	---	---	11.5	6.5	---	---	15.5	11.0	12.5	11.5	---	---
MONTH	8.5	4.0	11.5	4.5	14.5	7.0	16.5	8.5	16.5	9.0	14.0	7.0

14179000 BREITENBUSH RIVER ABOVE CANYON CREEK, NEAR DETROIT, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
DEC				
02...	1500	5330	2340	33700
08...	1300	1360	28	103
JAN				
27...	1250	595	2	3.2
MAR				
16...	1200	310	3	2.5
APR				
21...	1210	343	4	3.7
JUN				
14...	1300	330	1	.89
JUL				
20...	1300	181	1	.49

14180500 DETROIT LAKE NEAR DETROIT, OR

LOCATION.--Lat 44°43'20", long 122°14'35", in SW¼NW¼ sec.7, T.10 S., R.5 E., Marion County, Hydrologic Unit 17090005, in control house near right abutment of Detroit Dam on North Santiam River, 4.9 mi (7.9 km) west of Detroit, and at mile 60.9 (98.0 km).

DRAINAGE AREA.--437 mi^2 (1,132 km^2)

PERIOD OF RECORD.--January 1953 to current year. Prior to October 1971, published as Detroit Reservoir near Detroit.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by concrete, gravity-type dam with six 42-ft (12.8 m) by 28-ft ((8.5 m) control gates. Length of dam is 1,580 ft (481.6 m), built by Corps of Engineers. Storage began in January 1953. Total capacity is 455,100 acre-ft (561 hm^3) and usable capacity is 340,100 acre-ft (419 hm^3) between elevations 1,425.0 ft (434.34 m), proposed lower limit of operation, and 1,569.0 ft (478.23 m), top of spillway gates. Reservoir used for flood control, power development, irrigation, improvement of navigation, pollution abatement, and other purposes. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 457,900 acre-ft (565 hm^3) July 13, 1972, elevation, 1,569.79 ft (478.472 m); minimum, 115,500 acre-ft (142 hm^3) Jan. 30, 1969, elevation, 1,425.37 ft (434.453 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 412,000 acre-ft (508 hm^3) July 18, elevation, 1,556.47 ft (474.412 m); minimum, 153,700 acre-ft (190 hm^3) Jan. 27, elevation, 1,449.63 ft (441.847 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)

1,425	115,000	1,480	210,900	1,530	331,500
1,430	122,200	1,490	232,000	1,540	360,200
1,440	137,700	1,500	254,600	1,550	390,900
1,450	154,400	1,510	278,700	1,560	424,000
1,460	172,200	1,520	304,400	1,570	458,600
1,470	191,100				

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1520.76	1487.39	1507.62	1474.53	1454.63	1491.35	1504.86	1529.32	1552.14	1555.47	1554.76	1551.68
2	1519.26	1489.01	1513.46	1471.67	1457.79	1491.90	1505.29	1530.18	1552.40	1555.62	1554.61	1551.37
3	1518.39	1488.93	1518.17	1469.37	1462.17	1492.39	1505.60	1530.92	1552.66	1555.70	1554.45	1551.04
4	1517.47	1488.20	1516.85	1467.98	1465.20	1492.84	1505.90	1531.58	1552.89	1555.77	1554.32	1550.74
5	1516.15	1487.24	1513.24	1467.00	1467.83	1493.29	1506.50	1532.07	1553.12	1555.81	1554.19	1550.30
6	1514.51	1486.06	1511.82	1466.89	1470.37	1493.66	1507.05	1532.49	1553.34	1555.89	1554.09	1549.86
7	1513.16	1484.92	1511.08	1465.80	1472.36	1494.09	1507.51	1532.85	1553.52	1555.96	1553.99	1549.39
8	1511.66	1483.60	1506.96	1464.53	1474.09	1494.63	1507.92	1533.18	1553.65	1556.02	1553.88	1548.93
9	1510.03	1482.15	1501.61	1463.41	1475.42	1495.26	1508.32	1533.55	1553.85	1556.12	1553.68	1548.61
10	1508.31	1480.54	1496.12	1462.29	1476.35	1495.80	1508.73	1534.08	1554.13	1556.16	1553.54	1548.61
11	1506.48	1479.04	1499.10	1460.71	1477.40	1496.33	1509.20	1534.90	1554.44	1556.15	1553.32	1548.31
12	1504.59	1477.30	1504.22	1459.35	1478.25	1496.78	1509.66	1535.72	1554.58	1556.13	1553.30	1547.60
13	1502.74	1475.84	1527.07	1457.85	1478.86	1497.27	1510.09	1536.82	1554.73	1556.17	1553.28	1546.75
14	1500.82	1477.19	1544.00	1456.21	1479.82	1497.65	1510.51	1538.51	1554.77	1556.18	1553.18	1545.91
15	1499.44	1480.84	1554.29	1454.23	1480.75	1498.01	1510.92	1540.65	1555.02	1556.20	1553.23	1545.01
16	1498.65	1481.57	1553.91	1452.01	1481.46	1498.27	1511.42	1542.40	1555.18	1556.32	1553.28	1544.26
17	1497.79	1480.76	1550.21	1451.66	1482.18	1498.55	1511.88	1543.01	1555.29	1556.36	1553.28	1543.64
18	1496.10	1479.32	1544.22	1452.59	1482.86	1498.87	1512.33	1544.96	1555.41	1556.32	1553.23	1542.95
19	1494.39	1477.44	1537.21	1453.57	1483.52	1499.18	1512.87	1546.01	1555.50	1556.33	1553.14	1541.92
20	1492.97	1475.22	1529.18	1453.58	1484.20	1499.50	1513.43	1546.97	1555.54	1556.32	1553.22	1540.87
21	1491.70	1472.75	1520.20	1453.66	1484.91	1499.84	1514.09	1547.88	1555.58	1556.30	1553.22	1539.78
22	1490.98	1470.51	1512.34	1453.92	1485.63	1500.19	1515.11	1548.48	1555.59	1556.20	1553.27	1538.65
23	1490.30	1467.86	1506.26	1453.61	1486.34	1500.82	1516.02	1548.97	1555.61	1556.12	1553.32	1537.91
24	1489.41	1468.58	1500.90	1452.15	1487.10	1501.44	1517.01	1549.32	1555.62	1556.04	1553.35	1537.11
25	1488.77	1496.50	1495.50	1450.43	1487.93	1501.99	1518.30	1549.66	1555.62	1555.91	1553.38	1535.98
26	1488.31	1510.34	1489.39	1449.83	1489.02	1502.46	1521.00	1549.98	1555.59	1555.56	1553.37	1534.64
27	1487.42	1513.55	1485.68	1449.98	1489.93	1502.90	1523.62	1550.40	1555.56	1555.38	1553.22	1533.60
28	1486.55	1511.99	1483.77	1450.66	1490.68	1503.34	1525.49	1550.80	1555.50	1555.27	1552.95	1532.54
29	1485.78	1513.45	1481.81	1451.28	---	1503.73	1527.03	1551.25	1555.45	1555.16	1552.59	1531.46
30	1486.20	1511.13	1479.66	1451.75	---	1504.14	1528.23	1551.60	1555.40	1555.03	1552.29	1530.52
31	1486.76	---	1477.25	1453.89	---	1504.50	---	1551.88	---	1554.90	1552.00	---
MEAN	1500.51	1485.97	1512.04	1457.95	1478.11	1498.10	1512.86	1541.33	1554.59	1555.90	1553.45	1543.33
MAX	1520.76	1513.55	1554.29	1474.53	1490.68	1504.50	1528.23	1551.88	1555.62	1556.36	1554.76	1551.68
MIN	1485.78	1467.86	1477.25	1449.83	1454.63	1491.35	1504.86	1529.32	1552.14	1554.90	1552.00	1530.52
(†)	225,000	281,500	205,400	161,200	233,500	265,300	326,600	396,900	408,500	406,800	397,300	333,000
(‡)	-85,000	+56,500	-76,100	-44,200	+72,300	+31,800	+61,300	+70,300	+11,600	-1,700	-9,500	-64,300

CAL YR 1977 MEAN 1511.43 MAX 1567.88 MIN 1437.57 AC-FT ‡ +61,400
WTR YR 1978 MEAN 1516.40 MAX 1556.36 MIN 1449.83 AC-FT ‡ +23,000

† Contents, in acre-feet, at 2400, on last day of month.
‡ Change in contents, in acre-feet.

14181500 NORTH SANTIAM RIVER AT NIAGARA, OR

LOCATION.--Lat 44°45'10", long 122°17'50", in NE¼NE¼ sec.34, T.9 S., R.4 E., Marion County, Hydrologic Unit 17090005, on left bank 0.1 mi (0.2 km) downstream from Little Sardine Creek, 0.8 mi (1.3 km) downstream from Big Cliff Dam, 2.1 mi (3.4 km) east of Niagara, and at mile 57.3 (92.2 km).

DRAINAGE AREA.--453 mi² (1,173 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1908 to January 1920, October 1921 to March 1922, October 1938 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as North Fork of Santiam River near Niagara prior to October 1913, and as "above Mayflower Creek, near Detroit" October 1938 to September 1952.

REVISED RECORDS.--WSP 1288: 1914-18, 1920. WSP 1718: 1953-54.

GAGE.--Water-stage recorder. Datum of gage is 1,093.78 ft (333.384 m) National Geodetic Vertical Datum of 1929 (Bureau of Public Roads bench mark). See WSP 1738 for history of changes prior to Oct. 1, 1952.

REMARKS.--Water-discharge records excellent. Flow regulated since 1953 by Detroit Lake (see station 14180500) and Big Cliff Reservoir, usable capacity for reregulating purposes, 2,930 acre-ft (3.61 hm³). No diversion above station.

AVERAGE DISCHARGE.--50 years (water years 1910-19, 1939-78), 2,352 ft³/s (66.61 m³/s), 70.51 in/yr (1,791 mm/yr), 1,704,000 acre-ft/yr (2.10 hm³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,200 ft³/s (1,790 m³/s) Nov. 22, 1909, gage height, 16.4 ft (5.00 m), from floodmark, site and datum then in use, from rating curve extended above 35,000 ft³/s (991 m³/s); minimum, 19 ft³/s (0.54 m³/s) Aug. 21, 1963; minimum daily, 395 ft³/s (11.2 m³/s) Mar. 25, 26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,300 ft³/s (518 m³/s) Dec. 17, gage height, 9.84 ft (2.999 m); minimum, 430 ft³/s (12.2 m³/s) July 15; minimum daily, 714 ft³/s (20.2 m³/s) Apr. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3070	2800	9760	4870	1110	1010	1010	813	959	927	842	1330
2	3100	3190	4760	4940	1140	1010	1020	805	992	919	888	1190
3	1950	3160	4960	5000	1420	1010	1010	880	1010	888	896	1210
4	2110	3030	10000	5140	1720	1010	984	975	984	865	888	1180
5	2500	2990	10800	5160	1540	1010	935	1060	1020	791	820	1650
6	3000	3000	9830	5300	1670	1000	896	1030	992	813	828	1590
7	3050	3050	9110	5120	2010	984	835	1030	1000	776	828	1590
8	3150	3070	11200	5160	2240	984	828	1030	1020	798	813	1600
9	3070	3110	11200	5180	2110	967	828	1020	1030	748	813	1590
10	3000	3020	11200	5220	2190	951	820	911	1030	776	805	1660
11	3150	2880	6760	5180	1610	1000	828	943	1050	798	813	2410
12	3130	3070	4880	5260	1560	1020	727	927	1030	784	784	2660
13	3130	3070	1870	5280	1520	1030	727	919	1040	791	791	2540
14	2960	2870	1320	5240	1070	975	748	927	1300	776	784	2480
15	2340	3840	1830	5360	1010	975	741	805	1090	776	791	2410
16	1730	3860	11800	5400	1030	992	714	748	1070	820	784	2170
17	1660	4050	14500	4160	1030	1030	714	755	1050	850	776	2140
18	2430	4070	16400	3010	1030	1060	748	741	1050	798	776	2480
19	2630	4070	16400	2990	1020	1070	741	755	1070	734	776	2640
20	2180	4070	16600	3710	1040	1030	734	727	1030	784	784	2700
21	2060	4150	17000	3610	1050	1000	741	720	1030	805	784	2660
22	1400	4150	13900	3470	1030	1020	741	935	1030	850	798	2660
23	1410	5060	10800	3430	1030	1030	741	992	1100	865	813	2060
24	1660	5310	10800	4120	1030	1030	741	1110	1010	865	1050	2010
25	2220	1560	10900	3890	1030	1030	748	1060	1030	975	1090	2770
26	1970	1850	10700	3020	1030	1040	769	1060	1040	1340	1080	2600
27	2090	5230	7100	2260	1030	1040	769	1020	1030	951	1040	2440
28	2020	9230	4770	1670	1010	1030	776	1190	1040	880	1250	2190
29	1970	7410	4750	1710	---	1000	798	1010	1030	865	1230	2380
30	2070	9580	4770	1790	---	984	850	992	1030	820	1230	2090
31	2140	---	4770	1190	---	975	---	1000	---	865	1210	---
TOTAL	74350	119820	285440	126880	37310	31297	24262	28890	31187	26293	27855	63080
MEAN	2398	3994	9208	4093	1333	1010	809	932	1040	848	899	2103
MAX	3150	9580	17000	5400	2240	1070	1020	1190	1300	1340	1250	2770
MIN	1400	1560	1320	1190	1010	951	714	720	959	734	776	1180
AC-FT	147500	237700	566200	251700	74000	62080	48120	57300	61860	52150	55250	125100
MEAN†	1,016	4,944	7,971	3,375	2,634	1,527	1,839	2,075	1,235	820	744	1,022
CFSM†	2.24	10.91	17.60	7.45	5.82	3.37	4.06	4.58	2.73	1.81	1.64	2.26
IN.†	2.59	12.18	20.29	8.59	6.06	3.89	4.53	5.28	3.04	2.09	1.89	2.52
AC-FT†	62,500	294,200	490,100	207,500	146,300	93,900	109,400	127,600	73,500	50,450	45,750	60,800

CAL YR 1977 TOTAL 758,452 MEAN 2,078 MAX 17,000 MIN 395 AC-FT 1,504,000 MEAN† 2,162 CFSM† 4.77 IN.† 64.81 AC-FT† 1,565,400
WTR YR 1978 TOTAL 876,664 MEAN 2,402 MAX 17,000 MIN 714 AC-FT 1,739,000 MEAN† 2,434 CFSM† 5.37 IN.† 72.95 AC-FT† 1,762,000

† Adjusted for change in contents of Detroit Lake.

14181500 NORTH SANTIAM RIVER AT NIAGARA, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: January 1953 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: Maximum, 16.5°C July 28, 29, 1958; minimum, 1.5°C on several days in 1957, 1971, and Jan. 10-13, 1974.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum, 13.0°C Oct. 5, 8, 10-12, 14, 15; minimum, 4.5°C Feb. 12.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	12.0	11.0	10.5	6.0	6.0	5.0	5.0	5.5	5.0	5.0	5.0
2	12.5	12.0	10.5	10.0	6.5	6.0	5.0	5.0	5.5	5.0	5.0	5.0
3	12.5	12.0	10.5	10.0	6.5	6.0	5.0	5.0	5.5	5.5	5.0	5.0
4	12.5	12.5	10.0	9.0	6.5	6.0	5.0	5.0	5.5	5.5	5.5	5.0
5	13.0	12.5	10.0	9.5	6.0	6.0	5.0	5.0	5.5	5.5	5.5	5.0
6	12.5	12.5	9.5	9.0	6.5	6.0	5.0	5.0	5.5	5.5	5.5	5.0
7	12.5	12.5	9.5	9.0	6.0	6.0	5.0	5.0	5.5	5.5	5.5	5.5
8	13.0	12.5	9.5	8.5	6.0	6.0	5.0	5.0	5.5	5.5	5.5	5.5
9	12.5	12.0	9.5	9.0	6.5	6.0	5.0	5.0	5.5	5.5	5.5	5.5
10	13.0	12.0	9.5	9.0	6.5	6.0	5.0	5.0	5.5	5.0	5.5	5.5
11	13.0	12.5	9.0	9.0	6.5	6.0	5.0	5.0	5.0	5.0	5.5	5.5
12	13.0	12.5	9.0	8.5	6.0	5.5	5.0	5.0	5.0	4.5	5.5	5.0
13	12.5	12.5	9.0	9.0	6.5	5.5	5.5	5.0	5.0	5.0	5.0	5.0
14	13.0	12.5	9.0	8.5	7.0	6.5	5.5	5.0	5.0	5.0	5.0	5.0
15	13.0	12.5	8.5	8.5	7.0	6.5	5.5	5.0	5.0	5.0	5.0	5.0
16	12.5	12.5	8.5	8.0	7.0	6.0	5.5	5.0	5.0	5.0	5.5	5.0
17	12.5	12.5	8.0	8.0	6.0	6.0	5.5	5.0	5.0	5.0	6.0	5.5
18	12.5	12.5	8.0	7.5	6.5	6.0	5.5	5.5	5.0	5.0	6.0	5.5
19	12.5	12.0	8.0	7.5	6.5	6.0	5.5	5.5	5.5	5.0	6.0	6.0
20	12.5	12.0	7.5	7.5	6.0	6.0	5.5	5.5	5.5	5.0	6.0	6.0
21	12.5	12.0	7.5	7.5	6.0	6.0	5.5	5.5	5.5	5.5	6.0	5.5
22	12.5	12.0	7.0	7.0	6.0	6.0	5.5	5.0	5.5	5.5	6.0	5.5
23	12.5	12.0	7.0	6.5	6.0	6.0	5.5	5.0	5.5	5.5	6.0	5.5
24	12.5	12.0	7.0	6.5	6.0	6.0	5.5	5.0	5.5	5.5	6.0	5.5
25	12.0	12.0	6.5	6.5	6.0	6.0	5.5	5.0	5.5	5.5	6.0	5.5
26	12.0	12.0	7.0	6.5	6.0	5.5	5.5	5.0	5.5	5.5	6.0	6.0
27	12.0	11.5	6.5	6.0	5.5	5.5	5.5	5.0	5.5	5.5	6.5	6.0
28	11.5	11.5	6.0	6.0	5.5	5.5	5.5	5.0	5.5	5.0	6.0	6.0
29	12.0	11.5	6.0	6.0	5.5	5.5	5.5	5.5	---	---	6.5	6.0
30	11.5	11.0	6.0	6.0	5.5	5.5	5.5	5.0	---	---	6.5	6.0
31	11.0	10.5	---	---	5.5	5.0	5.5	5.0	---	---	6.5	6.0
MONTH	13.0	10.5	11.0	6.0	7.0	5.0	5.5	5.0	5.5	4.5	6.5	5.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	6.0	7.0	7.0	8.5	8.0	8.5	8.5	9.5	8.5	---	---
2	6.0	6.0	7.0	6.5	8.5	7.5	8.5	8.5	9.5	8.5	---	---
3	6.5	6.0	7.0	6.5	8.5	7.5	8.5	8.5	9.5	9.0	---	---
4	6.5	6.0	7.0	6.5	9.0	8.0	8.5	8.0	9.5	9.0	---	---
5	6.0	6.0	7.0	6.5	9.0	8.0	9.0	8.0	9.5	9.0	---	---
6	6.5	6.0	7.0	6.5	9.0	8.0	9.0	8.5	10.0	9.0	---	---
7	6.5	6.0	7.5	6.5	8.5	8.0	9.0	8.5	10.0	9.0	---	---
8	6.5	6.0	7.5	7.0	9.0	8.0	9.5	9.0	10.0	9.0	---	---
9	6.5	6.0	7.5	7.0	8.5	8.5	9.5	9.0	10.0	9.0	---	---
10	7.0	6.5	7.0	7.0	8.5	8.0	9.0	9.0	9.5	9.0	---	---
11	7.0	6.5	7.0	7.0	8.5	8.0	9.5	8.5	9.5	9.0	---	---
12	7.0	6.5	7.0	7.0	8.0	8.0	9.5	8.5	9.5	9.5	---	---
13	7.0	6.5	7.0	7.0	8.0	8.0	9.5	8.5	9.5	9.5	---	---
14	6.5	6.5	7.0	7.0	8.0	8.0	9.5	9.0	9.5	9.0	---	---
15	6.5	6.5	7.0	7.0	8.0	8.0	9.0	8.5	9.5	9.0	11.0	10.5
16	6.5	6.5	7.5	7.0	8.5	8.0	9.0	8.5	9.5	9.0	11.0	10.5
17	6.5	6.5	7.5	7.0	9.0	8.0	9.0	8.5	9.5	9.0	11.0	10.5
18	7.0	6.5	8.0	7.0	8.5	8.0	10.0	9.0	10.0	9.0	11.0	10.5
19	7.0	6.5	8.5	7.5	8.5	8.0	10.0	9.0	9.5	---	11.5	11.0
20	6.5	6.5	8.5	7.5	8.5	8.0	10.0	9.0	---	---	11.5	10.5
21	6.5	6.5	8.0	7.5	8.5	8.5	10.0	9.0	---	---	11.5	11.0
22	6.5	6.5	8.5	7.5	9.0	8.0	9.5	8.5	---	---	11.5	11.5
23	6.5	6.0	8.0	7.5	8.5	8.5	9.5	8.5	---	---	12.0	11.5
24	7.0	6.5	8.0	7.5	8.5	8.0	9.5	8.5	---	---	12.0	12.0
25	7.0	6.5	7.5	7.5	8.0	8.0	10.0	8.5	---	---	12.0	12.0
26	7.0	6.5	7.5	7.5	8.0	8.0	9.5	9.0	---	---	12.0	12.0
27	7.0	7.0	7.5	7.5	9.0	8.0	9.0	9.0	---	---	12.0	12.0
28	7.0	7.0	7.5	7.0	9.0	8.5	9.0	9.0	---	---	12.0	12.0
29	7.0	6.5	7.5	7.5	8.5	8.5	9.5	9.0	---	---	12.5	12.0
30	7.0	6.5	8.0	7.5	8.5	8.0	9.0	8.5	---	---	12.5	12.0
31	---	---	8.5	7.5	---	---	9.5	8.5	---	---	---	---
MONTH	7.0	6.0	8.5	6.5	9.0	7.5	10.0	8.0	10.0	8.5	12.5	10.5

14181900 LITTLE NORTH SANTIAM RIVER ABOVE EVANS CREEK, NEAR GATES, OR

LOCATION.--Lat 44°45'06", long 122°21'23", in SW¼NW¼ sec.22, T.8 S., R.4 E., Marion County, Hydrologic Unit 17090005, and at mile 16.1 (25.9 km).

DRAINAGE AREA.--53.1 mi^2 (137.5 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1978 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
DEC 02...	1200	4800	129	1670
JAN 27...	1610	342	3	2.8
MAR 16...	1545	149	5	2.0
APR 20...	1730	305	3	2.5
JUN 13...	1335	240	1	.65
JUL 19...	1540	52	1	.14

14182500 LITTLE NORTH SANTIAM RIVER NEAR MEHAMA, OR

LOCATION.--Lat 44°47'30", long 122°34'40", in NW¼ sec.16, T.9 S., R.2 E., Marion County, Hydrologic Unit 17090005, on left bank 2.0 mi (3.2 km) east of Mehama and at mile 2.0 (3.2 km).

DRAINAGE AREA.--112 mi^2 (290 km^2) at cableway 1.2 mi (1.9 km) downstream where all discharge measurements are made.

PERIOD OF RECORD.--October 1931 to current year. Records for July to September 1924 and July to September 1931 at site 4 mi (6.4 km) upstream not equivalent owing to difference in drainage areas.

REVISED RECORDS.--WSP 754: 1932. WSP 1218: 1934, 1936, 1949-50. WSP 1935: Maximum only, 1932-34, 1936, 1938, 1943, 1945-49, 1950(M,P), 1951-53(M), 1954(M,P), 1955(M), 1956(M,P), 1957(M), 1958-59(M,P). WSP 2135: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 655.41 ft (199.769 m) National Geodetic Vertical Datum of 1929. Prior to June 12, 1948, nonrecording gage at about same site and datum.

REMARKS.--Records good. No regulation or diversion above station. Records herein are for measuring site.

AVERAGE DISCHARGE.--47 years, 778 ft^3/s (22.03 m^3/s), 94.33 in/yr (2,396 mm/yr), 563,700 acre-ft/yr (695 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft^3/s (1,020 m^3/s) Dec. 22, 1964, gage height, 16.73 ft (5.099 m), from rating curve extended above 17,000 ft^3/s (481 m^3/s); minimum, 13 ft^3/s (0.37 m^3/s) Aug. 30, 1961.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,200 ft^3/s (232 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 15	1030	8,370	237	9.43	2.874	Dec. 3	1900	16,200	459	11.90	3.627
Nov. 25	1930	*20,600	583	*12.99	3.959	Dec. 13	0830	17,200	487	12.15	3.703

Minimum, 38 ft^3/s (1.08 m^3/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	601	2330	1790	747	806	485	229	747	384	128	46	144
2	465	3320	7670	672	1830	423	263	642	342	142	44	130
3	371	1540	4980	1100	2220	384	304	563	307	149	43	121
4	307	972	3510	2400	1650	367	319	525	281	146	43	128
5	260	760	2250	1780	1320	346	392	480	256	139	42	164
6	256	630	3230	2620	1330	319	401	442	233	124	40	198
7	636	678	3600	1890	1240	311	354	414	210	113	42	210
8	601	619	2090	1830	1310	346	323	384	195	105	47	213
9	437	536	1490	1660	1100	363	304	384	204	99	42	319
10	350	465	1940	1460	866	342	330	414	350	94	41	721
11	292	414	4080	1190	715	330	371	654	660	88	39	1110
12	253	388	4200	1420	613	315	323	866	475	81	46	728
13	226	574	13700	1290	536	327	281	989	423	76	126	515
14	201	2400	6930	1190	485	315	278	1970	475	78	105	428
15	181	5300	4780	1040	475	296	253	2350	766	92	124	359
16	167	2500	2940	939	428	281	281	1720	648	144	256	307
17	154	1560	2280	1150	433	281	334	1210	500	139	278	296
18	144	1100	1830	1280	451	278	410	898	414	111	184	480
19	135	828	1420	1310	475	270	480	721	367	97	142	428
20	126	666	1120	1180	505	263	525	619	319	90	195	359
21	119	568	922	1260	505	256	607	541	278	80	405	304
22	113	728	806	1390	470	253	964	475	253	73	359	281
23	130	1260	800	1100	442	307	1040	419	233	67	367	260
24	149	3600	2070	906	428	371	955	397	217	62	346	226
25	557	16700	2460	793	446	359	1190	388	207	60	557	201
26	734	6770	1630	753	760	327	2050	354	189	57	397	181
27	490	3150	1190	690	703	300	2000	536	172	57	300	162
28	379	2660	930	660	563	281	1490	820	151	54	239	151
29	397	3580	874	666	---	263	1170	636	144	53	198	137
30	1580	2440	922	596	---	256	922	515	137	49	172	130
31	2170	---	882	568	---	243	---	437	---	47	159	---
TOTAL	12981	69036	89316	37530	23105	9858	19143	22510	9790	2894	5424	9391
MEAN	419	2301	2881	1211	825	318	638	726	326	93.4	175	313
MAX	2170	16700	13700	2620	2220	485	2050	2350	766	149	557	1110
MIN	113	388	800	568	428	243	229	354	137	47	39	121
CFSM	3.74	20.5	25.7	10.8	7.37	2.84	5.70	6.48	2.91	.83	1.56	2.80
IN.	4.31	22.93	29.67	12.47	7.67	3.27	6.36	7.48	3.25	.96	1.80	3.12
AC-FT	25750	136900	177200	74440	45830	19550	37970	44650	19420	5740	10760	18630

CAL YR 1977 TOTAL 301179 MEAN 825 MAX 16700 MIN 32 CFSM 7.37 IN 100.03 AC-FT 597400
WTR YR 1978 TOTAL 310978 MEAN 852 MAX 16700 MIN 39 CFSM 7.61 IN 103.29 AC-FT 616800

14183000 NORTH SANTIAM RIVER AT MEHAMA, OR

LOCATION.--Lat 44°47'20", long 122°37'00", in NW¼ sec.18, T.9 S., R.2 E., Marion County, Hydrologic Unit 17090005, on right bank 300 ft (91 m) downstream from highway bridge at Mehama, 0.5 mi (0.8 km) downstream from Little North Santiam River, and at mile 38.71 (62.28 km).

DRAINAGE AREA.--655 mi² (1,696 km²), at cableway 0.8 mi (1.3 km) downstream, where all discharge measurements are made.

PERIOD OF RECORD.--July 1905 to March 1907, October 1910 to September 1914, September 1921 to current year. Monthly discharge only September 1921, published in WSP 1318. Prior to October 1913, published as North Fork of Santiam River at Mehama.

REVISED RECORDS.--WSP 739: 1922-23(M). WSP 1044: 1943. WSP 1248: 1906, 1911-14, 1924(M), 1926, 1934-36(M), 1937, 1938(M), 1942(M). WSP 2135: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 602.49 ft (183.639 m) National Geodetic Vertial Datum of 1929. Prior to June 15, 1933, nonrecording gage at site 100 ft (30 m) upstream at same datum.

REMARKS.--Records excellent. Flow regulated since 1953 by Detroit Lake (see station 14180500) and Big Cliff Reservoir, usable capacity for reregulating purposes, 2,930 acre-ft (3.61 hm³). No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--62 years (water years 1906, 1911-14, 1922-78), 3,379 ft³/s (95.69 m³/s), 2,448,000 acre-ft/yr (3.02 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,600 ft³/s (2,170 m³/s) Dec. 28, 1945, gage height, 15.37 ft (4.685 m), from rating curve extended above 36,000 ft³/s (1,020 m³/s), on basis of slope-area measurement of peak flow; maximum gage height, 17.5 ft (5.33 m) Nov. 20, 1921, from graph based on gage readings, and Jan. 6, 1923, from floodmark, at site then in use; minimum discharge, 254 ft³/s (7.19 m³/s) Aug. 3, 1970; minimum daily, 420 ft³/s (11.9 m³/s) Sept. 18, 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,600 ft³/s (753 m³/s) Nov. 25, gage height, 9.80 ft (2.987 m); minimum, 815 ft³/s (23.1 m³/s) July 15; minimum daily, 884 ft³/s (25.0 m³/s) Aug. 10, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3770	5500	12900	6670	2410	1820	1420	2040	1570	1190	939	1520
2	3620	7400	15300	6670	3730	1730	1490	1820	1530	1190	968	1400
3	2540	5200	11100	7330	4620	1680	1530	1780	1500	1190	988	1380
4	2470	4350	15800	9070	4250	1660	1520	1800	1420	1150	978	1400
5	2710	4050	14900	8560	3640	1630	1580	1870	1430	1070	930	1830
6	3220	3860	15600	10700	3750	1580	1550	1790	1370	1070	911	1870
7	3790	3990	15300	8930	4090	1550	1430	1720	1350	1010	911	1890
8	3810	3920	15400	8690	4500	1590	1370	1670	1350	1020	902	1900
9	3580	3840	14200	8490	4180	1600	1340	1660	1380	978	902	2030
10	3400	3670	14900	8230	3840	1530	1360	1630	1590	958	884	2640
11	3460	3460	14400	7810	3060	1580	1400	1890	1910	988	911	3790
12	3400	3540	11700	8100	2730	1590	1270	2170	1690	958	884	3750
13	3400	3860	21000	7900	2570	1640	1200	2280	1660	968	988	3380
14	3150	5900	13300	7740	2090	1570	1210	3620	1960	939	958	3120
15	2660	10200	9310	7580	1940	1530	1190	4470	2090	949	988	2910
16	1980	7430	16800	7650	1860	1520	1230	3430	1960	1050	1130	2660
17	1860	6230	19600	6640	1870	1540	1290	2700	1760	1070	1130	2560
18	2390	5740	20800	5220	1870	1580	1410	2230	1660	988	1030	3120
19	2780	5380	19800	5170	1870	1580	1520	1970	1600	911	968	3320
20	2370	5120	19400	5780	1910	1540	1570	1760	1500	930	1060	3200
21	2200	5070	19500	6040	1910	1480	1720	1620	1460	958	1300	3120
22	1620	5530	17100	6090	1840	1490	2260	1670	1430	968	1270	3100
23	1600	7220	13000	5580	1790	1590	2360	1720	1480	988	1280	2520
24	1810	10700	14800	5870	1790	1660	2170	1790	1370	998	1460	2360
25	2850	23300	15600	5560	1820	1630	2390	1750	1380	1060	1790	3010
26	2890	11800	14300	4670	2210	1590	3790	1680	1380	1460	1600	2930
27	2690	9280	10700	3620	2100	1570	3770	1840	1340	1100	1440	2730
28	2510	13400	6670	2860	1930	1540	2990	2340	1310	998	1500	2460
29	2490	13100	6640	2860	---	1470	2560	1940	1300	988	1490	2610
30	3810	13700	6910	2770	---	1460	2280	1760	1290	939	1470	2360
31	4700	---	6700	2310	---	1420	---	1680	---	968	1440	---
TOTAL	89530	215740	443430	201160	76170	48940	54170	64090	46020	32002	35400	76870
MEAN	2888	7191	14300	6489	2720	1579	1806	2067	1534	1032	1142	2562
MAX	4700	23300	21000	10700	4620	1820	3790	4470	2090	1460	1790	3790
MIN	1600	3460	6640	2310	1790	1420	1190	1620	1290	911	884	1380
AC-FT	177600	427900	879500	399000	151100	97070	107400	127100	91280	63480	70220	152500

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CAL YR 1977  TOTAL   1206960   MEAN  3307   MAX  23300   MIN 851   AC-FT   2394000
WTR YR 1978  TOTAL   1383522   MEAN  3790   MAX  23300   MIN 884   AC-FT   2744000
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14185000 SOUTH SANTIAM RIVER BELOW CASCADIA, OR

LOCATION.—Lat 44°23'35", long 122°30'35", in SE¼ sec.36, T.13 S., R.2 E., Linn County, Hydrologic Unit 17090006, on left bank 100 ft (30 m) downstream from bridge at Cascadia ranger station, 0.5 mi (0.8 km) downstream from Mouse Creek, 0.5 mi (0.8 km) upstream from Deer Creek, 1.5 mi (2.4 km) southwest of Cascadia, and at mile 48.5 (78.0 km).

DRAINAGE AREA.—174 mi^2 (451 km^2), at gaging cable 0.7 mi (1.1 km) upstream.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—September 1935 to current year. Monthly discharge only September 1935, published in WSP 1318.

GAGE.—Water-stage recorder. Datum of gage is 759.88 ft (231.611 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1935, nonrecording gage.

REMARKS.—Water-discharge records excellent. No regulation or diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.—43 years, 827 ft^3/s (23.42 m^3/s), 64.54 in/yr (1,639 mm/yr), 599,200 acre-ft/yr (739 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 27,600 ft^3/s (782 m^3/s) Dec. 22, 1964, gage height, 19.68 ft (5.998 m), from rating curve extended above 14,000 ft^3/s (396 m^3/s); minimum, 23 ft^3/s (0.65 m^3/s) Dec. 1, 2, 1936.

EXTREMES FOR CURRENT YEAR.—Peak discharges above base of 5,700 ft^3/s (161 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2000	*16,400	464	*14.43	4.398	Dec. 13	1830	11,300	320	12.12	3.694
Dec. 2	2230	7,980	226	10.28	3.133						

Minimum, 68 ft^3/s (1.93 m^3/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	345	1370	2010	901	908	527	347	994	467	197	85	129
2	283	2280	4100	835	1670	490	404	849	427	234	83	120
3	245	1320	5040	970	3330	473	432	725	393	241	83	114
4	216	880	3100	1250	2200	490	432	656	362	238	80	122
5	197	860	2430	1930	1820	467	496	599	342	227	79	185
6	204	887	2680	2630	1750	467	527	546	314	207	78	220
7	310	880	3230	2000	1760	467	484	496	297	200	76	249
8	289	736	2120	1700	1760	572	456	461	280	191	72	256
9	243	602	1710	1580	1540	694	438	461	276	185	69	319
10	219	492	1720	1570	1270	613	456	502	347	179	68	656
11	199	430	2810	1330	1080	578	478	886	377	174	69	758
12	185	390	3310	1480	939	572	450	1100	310	171	78	565
13	173	497	7890	1420	828	572	404	1020	314	160	106	461
14	162	1730	7940	1400	750	559	393	1300	314	155	99	410
15	154	3560	5360	1290	750	508	388	2010	478	147	120	342
16	145	2310	2620	1420	671	490	410	2000	388	179	179	301
17	140	1480	3080	1700	656	484	450	1590	338	171	210	288
18	134	1130	2330	1720	649	467	450	1220	306	155	135	450
19	130	873	1710	1620	649	456	496	978	293	145	114	410
20	124	705	1520	1480	649	432	533	828	276	138	126	342
21	121	619	1370	1620	641	427	599	709	260	129	163	301
22	117	1730	1170	1760	613	415	886	627	249	122	217	280
23	132	2080	1210	1460	606	490	994	578	238	118	223	260
24	154	4350	2610	1200	592	546	901	546	241	112	207	238
25	382	11500	2500	1030	578	478	1040	546	264	106	357	220
26	705	6930	1770	939	671	450	2710	508	245	100	234	200
27	430	3550	1380	821	620	427	2470	627	227	100	185	188
28	323	2630	1150	791	559	410	1850	791	213	97	163	177
29	307	3490	1120	807	---	393	1440	679	207	95	145	168
30	748	2510	1150	725	---	377	1190	578	207	89	135	163
31	1390	---	1030	702	---	362	---	514	---	87	133	---
TOTAL	8906	62801	83170	42081	30509	15153	23004	25924	9250	4849	4171	8892
MEAN	287	2093	2683	1357	1090	489	767	836	308	156	135	296
MAX	1390	11500	7940	2630	3330	694	2710	2010	478	241	357	758
MIN	117	390	1030	702	559	362	347	461	207	87	68	114
CFSM	1.65	12.0	15.4	7.80	6.26	2.81	4.41	4.81	1.77	.90	.78	1.70
IN.	1.90	13.43	17.78	9.00	6.52	3.24	4.92	5.54	1.98	1.04	.89	1.90
AC-FT	17670	124600	165000	83470	60510	30060	45630	51420	18350	9620	8270	17640

CAL YR 1977 TOTAL 277190 MEAN 759 MAX 11500 MIN 46 CFSM 4.36 IN 59.26 AC-FT 549800
WTR YR 1978 TOTAL 318710 MEAN 873 MAX 11500 MIN 68 CFSM 5.02 IN 68.14 AC-FT 632200

14185000 SOUTH SANTIAM RIVER BELOW CASCADIA, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: June 1962 to July 1967, February 1969 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: Maximum, 25.0°C July 30, Aug. 7, 1965; minimum, 0.0°C Dec. 7-16, 1972, Jan. 8, 9, 1973, Jan. 6, 7, 1974, Feb. 6, 1976.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum, 23.5°C Aug. 8; minimum, 1.5°C Nov. 19, 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
27...	1010	430	50	58
DEC				
06...	1630	2780	46	345
JAN				
26...	0915	993	3	8.0
MAR				
14...	1440	635	4	6.9
APR				
20...	1010	624	4	6.7
JUN				
08...	0930	394	2	2.1
15...	0820	635	6	10
JUL				
19...	0945	248	2	1.3

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10.0	8.5	8.5	7.5	8.0	7.5	3.5	3.0	5.5	5.5	5.0	3.5
2	10.0	9.5	8.5	6.5	8.5	8.0	4.5	3.0	6.0	5.5	5.5	4.0
3	9.5	9.0	6.5	5.5	8.0	7.5	6.0	4.5	7.0	6.0	6.5	5.0
4	10.0	8.0	6.0	5.0	7.5	6.5	6.0	5.5	7.5	6.5	7.0	6.0
5	10.0	9.5	6.5	6.0	6.5	6.0	6.0	5.5	7.5	7.0	6.5	6.0
6	9.5	9.0	7.0	6.0	7.5	6.5	6.0	6.0	7.0	6.0	7.5	6.0
7	10.0	9.0	7.0	6.0	7.0	5.5	6.5	6.0	6.5	6.0	7.5	7.0
8	9.5	8.0	6.5	4.5	6.0	5.0	7.0	6.5	6.0	5.5	7.5	7.0
9	9.0	8.0	5.5	4.5	6.0	5.0	7.0	6.5	6.0	5.0	8.0	7.0
10	8.5	7.5	6.0	5.5	7.0	6.0	6.5	6.5	5.0	4.0	7.0	5.5
11	9.0	8.0	7.0	6.0	7.5	7.0	6.5	5.5	4.0	3.5	6.5	6.0
12	9.5	8.5	7.0	6.5	7.5	7.0	6.5	6.0	4.5	3.0	6.0	5.0
13	11.0	9.5	7.0	6.5	8.5	7.5	7.0	6.5	5.0	3.5	6.0	5.0
14	10.5	10.0	8.0	6.5	8.5	8.0	7.0	6.5	5.5	4.5	6.0	5.0
15	10.5	9.5	8.0	7.0	8.0	6.0	7.0	6.5	5.5	4.5	6.0	4.5
16	10.5	10.0	7.0	5.5	6.0	6.0	7.0	6.0	5.0	3.5	7.5	4.5
17	10.0	9.0	5.5	4.5	6.5	6.0	6.5	6.5	6.0	4.5	8.5	6.0
18	9.0	8.5	4.5	3.0	6.0	5.5	6.5	5.5	6.5	5.5	8.5	6.5
19	9.5	8.5	3.0	1.5	5.5	5.0	6.5	6.0	6.5	5.0	9.0	6.5
20	9.0	8.0	2.5	1.5	5.0	5.0	7.0	6.5	7.0	5.5	9.0	6.5
21	8.5	8.0	3.5	2.5	6.0	5.0	7.0	6.0	7.0	6.0	9.0	7.0
22	8.5	7.5	5.5	4.0	6.0	5.5	6.0	5.0	6.5	6.0	9.0	7.0
23	9.5	7.5	6.0	5.5	6.0	6.0	5.0	4.5	7.5	6.0	9.0	7.5
24	10.0	9.5	7.5	6.0	6.5	6.0	4.5	4.0	7.5	7.0	8.0	7.0
25	10.0	9.0	8.5	7.5	6.5	6.0	5.5	4.5	7.0	6.5	9.5	7.0
26	9.0	8.0	7.5	7.0	6.0	5.0	6.0	5.5	7.0	6.0	9.5	7.5
27	8.0	7.0	7.5	7.0	6.0	4.5	5.5	4.5	6.0	5.5	10.0	7.5
28	8.5	7.0	7.5	6.5	6.5	5.5	6.5	5.5	5.0	4.5	9.5	8.0
29	8.5	7.5	8.0	7.5	6.5	6.0	6.5	5.5	---	---	10.0	9.0
30	8.5	7.5	7.5	7.0	6.0	5.5	5.5	4.5	---	---	9.5	9.0
31	7.5	7.0	---	---	5.5	4.0	5.5	5.5	---	---	9.5	8.5
MONTH	11.0	7.0	8.5	1.5	8.5	4.0	7.0	3.0	7.5	3.0	10.0	3.5

14185000 SOUTH SANTIAM RIVER BELOW CASCADIA, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	7.0	9.0	7.0	14.5	10.0	17.0	14.0	20.5	17.0	16.0	14.5
2	7.0	6.0	9.0	7.0	15.0	11.0	14.5	13.0	20.5	18.0	17.5	15.5
3	8.5	6.0	8.5	7.0	15.5	11.5	14.0	13.0	22.0	18.5	17.0	15.5
4	8.0	7.0	7.5	6.5	16.5	12.5	15.0	12.5	21.5	19.5	15.5	13.5
5	7.5	6.0	8.5	5.5	17.5	14.0	16.5	13.0	20.5	18.0	14.0	13.0
6	7.5	5.0	10.0	5.5	16.5	14.0	17.5	14.0	22.0	18.0	14.0	12.5
7	7.0	5.0	11.0	7.0	16.5	13.0	18.0	15.5	22.5	18.5	13.5	12.5
8	8.5	6.0	12.0	8.0	16.5	13.5	17.5	15.5	23.5	20.0	13.0	11.5
9	9.5	5.5	11.0	9.5	15.5	13.0	16.5	14.5	23.0	20.0	13.5	12.5
10	10.5	7.0	9.5	8.0	12.5	11.5	16.5	14.0	21.5	19.0	12.5	11.5
11	9.5	7.5	8.5	7.5	15.0	10.5	16.5	13.0	21.5	19.0	12.5	11.0
12	8.5	5.5	8.5	7.0	14.5	12.5	17.5	14.0	19.0	17.0	12.5	10.0
13	7.5	6.0	9.0	8.0	12.5	11.5	19.0	15.5	17.5	16.0	12.0	11.5
14	7.5	6.5	9.0	8.0	12.5	11.0	20.5	17.5	17.5	15.0	13.5	10.5
15	7.5	6.5	8.5	7.0	12.5	10.0	19.5	16.5	17.0	16.0	13.5	12.0
16	6.5	6.0	9.0	7.0	14.0	10.5	16.5	15.0	16.0	15.0	12.5	10.5
17	7.5	5.5	10.5	7.5	16.0	11.0	17.5	14.5	15.0	13.5	11.5	10.0
18	9.0	6.5	12.0	7.5	15.0	12.5	18.5	15.5	16.0	13.5	10.5	9.5
19	8.5	7.5	12.5	9.0	16.0	12.0	19.5	15.5	16.0	15.5	11.5	9.0
20	7.0	6.0	14.0	10.0	16.5	13.5	20.5	17.0	15.5	15.0	12.0	9.5
21	6.5	5.5	12.5	9.5	15.5	14.0	20.5	17.0	15.0	14.0	12.0	11.0
22	6.0	5.5	9.5	8.0	16.0	13.0	20.5	18.0	14.5	13.5	11.5	11.0
23	8.0	5.5	10.0	7.5	15.5	13.0	20.5	18.5	14.0	13.0	12.5	10.5
24	9.5	6.5	9.0	8.0	13.5	12.0	21.5	18.5	14.5	13.5	13.5	11.0
25	8.5	7.5	10.0	7.5	13.5	12.0	21.5	18.5	14.5	12.5	13.5	11.5
26	7.5	7.0	9.5	8.5	16.5	12.0	21.0	19.5	14.5	12.0	14.0	13.5
27	7.5	7.0	9.5	8.5	18.0	14.0	20.0	17.5	16.0	13.0	14.0	13.0
28	6.5	7.0	10.5	8.5	17.0	15.0	19.0	17.5	16.5	14.0	13.5	12.0
29	9.5	7.0	12.0	8.0	15.5	14.0	21.0	16.5	18.0	15.5	13.0	11.0
30	8.0	7.0	12.5	8.0	17.0	14.5	21.5	18.0	17.0	15.5	13.5	12.5
31	---	---	13.0	8.5	---	---	21.0	18.0	16.0	15.0	---	---
MONTH	10.5	5.0	14.0	5.5	18.0	10.0	21.5	12.5	23.5	12.0	17.5	9.0

14185800 MIDDLE SANTIAM RIVER NEAR CASCADIA, OR

LOCATION.--Lat 44°30'55", long 122°22'15", in NE¼ sec.19, T.12 S., R.4 E., Linn County, Hydrologic Unit 17090006, on right bank 5.6 mi (9.0 km) downstream from Bear Creek, 10 mi (16 km) northeast of Cascadia, and at mile 17.5 (28.2 km).

DRAINAGE AREA.--104 mi² (269 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,040 ft (320 m), from topographic map.

REMARKS.--Water-discharge records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--15 years, 652 ft³/s (18.46 m³/s), 85.14 in/yr (2,163 mm/yr), 472,400 acre-ft/yr (582 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,900 ft³/s (649 m³/s) Dec. 22, 1964, gage height, 15.75 ft (4.801 m), from floodmark, from rating curve extended above 7,000 ft³/s (198 m³/s) on basis of slope-area measurement of peak flow; minimum, 28 ft³/s (0.79 m³/s) Oct. 17, 26, 27, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	1900	*13,600	385	*12.18	3.712	Dec. 13	1600	12,300	348	11.62	3.542
Dec. 3	0030	5,680	161	8.09	2.466						

Minimum, 65 ft³/s (1.84 m³/s) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	411	1310	1600	695	662	422	265	666	349	158	91	93
2	329	2160	3730	643	1110	393	310	584	326	185	90	87
3	274	1240	4120	745	2060	373	333	524	304	180	90	82
4	237	878	2840	929	1480	369	342	491	286	175	90	85
5	209	740	2020	1040	1280	356	369	452	271	170	88	120
6	224	638	2710	1570	1240	346	369	422	259	160	88	148
7	430	638	2920	1300	1140	346	346	390	240	150	74	156
8	373	566	1960	1200	1060	393	329	366	224	144	71	189
9	307	504	1460	1150	952	433	323	359	229	138	73	259
10	265	448	1390	1120	818	397	359	369	277	134	68	408
11	234	411	2420	988	715	383	362	615	316	132	68	700
12	214	383	3040	1110	638	366	326	671	259	128	82	464
13	196	495	9550	1080	571	376	304	760	262	124	111	346
14	182	1330	6850	1040	532	366	292	982	274	120	93	289
15	169	2810	5050	958	508	346	283	1260	422	118	111	245
16	160	1840	3090	918	464	339	292	1200	342	164	156	216
17	154	1220	2220	1080	452	346	301	964	298	150	167	224
18	146	935	1640	1120	452	346	310	791	271	138	118	298
19	136	750	1270	1110	456	333	336	666	254	140	100	256
20	128	629	1020	1070	464	326	362	588	234	130	134	229
21	122	554	872	1150	460	316	430	528	221	120	173	206
22	118	964	776	1140	448	310	584	479	209	116	178	189
23	140	1320	823	941	441	373	588	441	206	112	175	178
24	158	3790	1710	818	433	408	629	426	204	109	182	167
25	441	10400	1710	735	441	369	760	411	206	105	265	154
26	597	5430	1290	695	588	342	1420	397	194	103	180	144
27	411	2760	1030	629	524	326	1360	520	182	103	144	134
28	329	2020	878	615	464	310	1090	597	173	98	122	130
29	316	2610	872	615	---	295	900	491	173	98	112	124
30	725	1940	867	566	---	289	765	426	164	90	102	118
31	1090	---	791	562	---	274	---	383	---	91	98	---
TOTAL	9225	51713	72519	29332	20853	10967	15039	18219	7629	4083	3694	6438
MEAN	298	1724	2339	946	745	354	501	588	254	132	119	215
MAX	1090	10400	9550	1570	2060	433	1420	1260	422	185	265	700
MIN	118	383	776	562	433	274	265	359	164	90	68	82
CFSM	2.87	16.6	22.5	9.10	7.16	3.40	4.82	5.65	2.44	1.27	1.14	2.07
IN.	3.30	18.50	25.94	10.49	7.46	3.92	5.38	6.52	2.73	1.46	1.32	2.30
AC-FT	18300	102600	143800	58180	41360	21750	29830	36140	15130	8100	7330	12770

CAL YR 1977 TOTAL 226706 MEAN 621 MAX 10400 MIN 58 CFSM 5.97 IN 81.09 AC-FT 449700
WTR YR 1978 TOTAL 249711 MEAN 684 MAX 10400 MIN 68 CFSM 6.58 IN 89.32 AC-FT 495300

14185800 MIDDLE SANTIAM RIVER NEAR CASCADIA, OR

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 22.5°C Aug. 2, 3, 6, 11-13, 16, 17, 1977; minimum, 0.5°C Dec. 23, 24, 1965, Feb. 5, 1976, Jan. 9, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 22.0°C Aug. 8; minimum, 2.0°C Nov. 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SFPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
26...	1115	638	20	34
DEC				
07...	1100	2970	281	2250
JAN				
25...	1055	730	13	26
MAR				
15...	1100	346	5	4.7

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
APR				
19...	1055	323	16	14
JUN				
07...	1020	240	2	1.3
15...	1015	445	10	12
JUL				
18...	1015	114	2	.62

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.5	8.5	7.5	6.5	7.5	6.5	3.0	2.5	5.0	4.5	---	---
2	9.5	8.5	7.5	6.0	8.0	7.5	4.0	3.0	5.5	5.0	---	---
3	9.5	8.5	6.0	5.0	7.5	7.0	5.0	4.0	6.0	5.5	---	---
4	9.0	8.0	6.0	5.0	7.0	6.0	5.0	4.5	6.5	5.5	---	---
5	9.5	8.5	6.5	6.0	6.5	6.0	5.0	4.5	6.5	6.0	---	---
6	9.0	8.0	6.5	6.0	7.0	6.0	5.5	5.0	6.0	5.5	---	---
7	9.5	8.5	6.5	5.5	6.5	6.0	6.0	5.0	6.0	5.5	---	---
8	9.0	8.0	5.5	4.5	5.5	5.0	6.0	5.5	5.5	5.0	---	---
9	9.0	8.0	5.5	4.5	5.5	5.0	6.0	5.5	5.5	4.5	---	---
10	8.5	7.5	6.0	5.0	6.5	5.5	6.0	5.5	4.5	3.5	---	---
11	8.5	7.5	6.5	6.0	6.5	6.5	6.0	5.0	4.0	3.5	---	---
12	9.0	8.0	6.5	6.5	7.0	6.5	6.0	5.0	3.5	3.0	---	---
13	10.0	9.0	7.0	6.5	8.0	7.0	6.0	6.0	4.5	3.0	---	---
14	9.5	9.0	7.0	6.5	7.5	7.5	6.0	5.5	---	---	---	---
15	9.5	9.0	7.5	7.0	7.5	5.5	6.0	5.5	---	---	6.0	---
16	9.5	9.0	7.0	6.5	5.5	5.0	6.0	5.5	---	---	6.5	4.0
17	9.5	8.5	6.0	5.0	5.5	5.0	6.0	5.5	---	---	7.5	5.0
18	8.5	8.0	4.5	4.0	5.5	5.0	5.5	5.0	---	---	8.0	5.5
19	9.5	8.5	4.0	3.0	5.0	4.5	6.0	5.5	---	---	8.0	6.0
20	8.5	7.5	2.5	2.0	4.5	4.0	6.5	6.0	---	---	8.0	6.0
21	8.5	8.0	3.5	2.5	5.0	4.5	6.0	5.0	---	---	8.5	6.5
22	8.0	7.0	4.5	3.5	5.0	4.5	5.0	4.5	---	---	8.5	6.5
23	8.5	8.0	5.0	4.5	5.5	5.0	4.5	4.0	---	---	8.0	6.5
24	9.0	8.5	6.0	5.5	5.5	5.0	4.0	3.5	---	---	7.5	6.5
25	9.0	8.5	7.5	6.0	5.5	5.0	5.0	4.0	---	---	9.0	6.5
26	8.0	7.0	7.0	6.5	5.0	4.5	5.0	5.0	---	---	9.0	6.5
27	7.0	6.5	6.5	6.0	5.0	4.5	5.0	4.0	---	---	9.5	7.0
28	7.5	6.5	6.5	6.5	5.5	5.0	5.5	5.0	---	---	9.5	7.5
29	7.5	7.5	7.5	6.5	5.5	5.0	5.5	5.0	---	---	9.5	8.0
30	7.5	6.5	7.0	6.5	5.0	4.5	5.0	4.0	---	---	9.0	8.5
31	7.0	6.0	---	---	5.0	3.5	5.0	4.5	---	---	9.5	7.5
MONTH	10.0	6.0	7.5	2.0	8.0	3.5	6.5	2.5	6.5	3.0	9.5	4.0

14185800 MIDDLE SANTIAM RIVER NEAR CASCADIA, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	6.5	8.5	6.5	14.0	9.5	16.0	13.5	19.5	15.0	15.5	13.0
2	6.5	4.5	8.0	6.5	15.0	10.0	13.5	12.5	20.0	15.5	16.0	14.5
3	7.5	5.0	8.5	6.5	15.0	11.0	13.0	12.0	21.0	16.5	15.0	13.5
4	7.0	6.0	7.0	6.0	15.5	11.5	15.5	11.5	20.5	17.5	13.5	12.5
5	6.5	5.5	8.0	5.0	17.0	12.5	---	12.0	20.0	16.0	13.0	12.0
6	7.0	4.5	8.0	5.5	16.0	13.0	---	---	19.5	17.0	12.5	12.0
7	7.0	5.0	11.0	6.5	16.0	12.0	18.0	14.0	21.5	17.0	12.0	11.5
8	8.0	6.0	11.5	7.0	16.5	12.5	17.5	14.5	22.0	18.0	11.5	11.0
9	9.0	6.5	10.5	9.0	15.0	12.0	16.0	13.5	21.5	17.5	11.5	11.0
10	9.5	8.5	9.0	8.0	11.5	10.5	15.0	13.0	20.0	16.5	11.5	10.5
11	9.5	7.0	8.0	7.0	14.5	10.0	16.5	12.0	19.5	17.0	11.0	10.0
12	8.5	5.0	8.0	7.0	13.0	11.0	17.5	13.0	17.5	15.0	11.5	9.5
13	7.0	6.0	8.5	7.5	12.0	10.5	18.5	14.0	15.5	14.0	11.0	10.5
14	7.5	6.0	8.0	7.0	11.5	10.0	19.5	15.5	16.5	13.5	12.0	10.5
15	7.0	6.0	7.5	6.5	11.5	9.0	18.0	15.5	16.0	14.5	12.0	11.0
16	6.5	5.5	8.5	6.5	13.0	9.5	15.0	14.0	14.5	13.0	12.0	9.5
17	6.5	5.0	10.0	7.0	15.0	10.0	17.0	13.0	13.5	12.0	10.5	9.5
18	8.5	6.0	11.0	7.0	13.5	11.5	18.0	14.0	15.5	11.5	9.5	8.5
19	7.5	6.5	12.0	8.0	16.0	11.5	18.5	14.0	14.5	13.5	10.5	8.5
20	6.5	5.5	13.0	9.0	16.0	12.5	19.0	15.0	13.5	13.0	11.0	8.5
21	5.5	4.5	11.5	8.5	15.5	13.0	19.5	15.0	13.0	12.5	11.5	10.0
22	5.0	4.5	9.5	7.5	16.0	12.5	19.5	15.5	13.0	12.0	11.5	9.5
23	7.0	4.5	9.5	7.0	14.5	12.5	21.0	16.5	13.0	11.5	11.5	10.5
24	8.5	6.0	9.0	7.0	13.0	11.5	21.0	16.5	12.5	12.0	12.0	10.5
25	7.5	7.0	9.5	7.0	12.5	11.0	21.0	16.5	12.5	11.5	12.5	11.0
26	7.0	6.5	9.0	8.0	16.0	11.0	20.0	18.0	14.0	10.5	13.0	11.0
27	7.5	6.0	9.0	8.5	17.0	12.0	19.5	15.5	14.5	11.5	13.0	12.0
28	8.0	6.5	10.0	8.5	15.5	13.0	19.5	16.0	16.0	12.5	12.0	10.5
29	9.0	6.5	12.0	8.0	15.5	13.0	20.0	15.5	16.5	13.5	12.0	10.0
30	7.5	6.5	12.0	7.5	17.5	13.5	20.5	16.5	15.5	14.5	12.0	11.0
31	---	---	13.0	8.0	---	---	19.5	15.5	15.0	14.0	---	---
MONTH	9.5	4.5	13.0	5.0	17.5	9.0	21.0	11.5	22.0	10.5	16.0	8.5

14183900 QUARTZVILLE CREEK NEAR CASCADIA, OR

LOCATION.--Lat 44°32'23", long 122°26'05", in NW¼ sec.10, T.12 S., R.3 E., Linn County, Hydrologic Unit 17090006, on Bureau of Land Management land, on right bank 80 ft (24 m) downstream from Panther Creek, 10 mi (16 km) north of Cascadia, and at mile 6.6 (10.6 km).

DRAINAGE AREA.--99.2 mi² (256.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1963 to November 1964 (destroyed by flood of December 1964); October 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,050 ft (320 m), from topographic map. Aug. 13, 1963, to Dec. 22, 1964, water-stage recorder on left bank at present datum.

REMARKS.--Water-discharge records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--14 years (water years 1964, 1966-78), 696 ft³/s (19.71 m³/s), 95.28 in/yr (2,420 mm/yr), 504,300 acre-ft/yr (622 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s (634 m³/s) Jan. 20, 1972, gage height, 16.38 ft (4.993 m); minimum, 14 ft³/s (0.40 m³/s) Aug. 19-23, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 36,500 ft³/s (1,030 m³/s) Dec. 22, 1964, from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 15	1030	6,020	170	10.71	3.264	Dec. 2	2200	unknown	-	-	-
Nov. 25	1830	15,700	445	14.53	4.429	Dec. 13	1600	*17,200	487	*14.94	4.554

Minimum, 50 ft³/s (1.42 m³/s) Aug. 6-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	330	1770	1400	698	958	458	228	625	320	121	58	88
2	258	2750	3500	610	2360	397	307	528	291	133	57	84
3	208	1250	5600	1110	3000	363	389	466	263	129	56	80
4	172	785	3500	1890	1750	359	429	433	240	123	56	84
5	149	638	1700	1740	1360	334	566	397	226	117	53	100
6	191	555	2700	3040	1300	313	538	374	209	110	52	130
7	522	598	3700	1760	1190	320	429	345	191	106	51	160
8	412	518	2000	1520	1250	405	374	320	181	103	50	200
9	288	436	1200	1380	1030	393	355	320	189	99	50	270
10	228	372	1400	1230	831	355	421	323	242	97	50	480
11	191	330	2100	1010	687	334	437	635	297	94	50	700
12	164	315	7000	1250	590	317	363	742	234	91	70	570
13	145	541	13500	1110	510	327	317	775	245	89	105	440
14	129	2130	7000	1020	471	330	304	1530	254	86	100	341
15	118	4000	4000	878	458	310	281	1780	413	83	90	278
16	108	2500	2500	826	421	297	300	1430	330	108	140	237
17	100	1700	1700	1220	425	300	352	1020	272	101	170	231
18	92	1100	1300	1310	449	294	437	763	240	86	130	320
19	86	700	1100	1280	475	281	458	610	220	82	94	278
20	80	560	900	1220	488	272	479	515	202	79	120	237
21	76	500	750	1460	475	263	595	445	186	76	170	209
22	71	1100	640	1470	441	254	983	397	174	73	180	189
23	102	2500	933	1070	417	330	946	367	169	72	180	174
24	138	4900	3060	837	401	454	933	359	164	69	200	160
25	820	12600	2390	725	421	405	1100	378	160	67	300	148
26	944	5000	1440	670	837	352	1990	352	150	66	230	135
27	487	2300	1040	605	704	317	1660	497	142	66	150	125
28	341	1700	820	585	538	291	1190	661	133	64	120	121
29	368	4300	896	580	---	272	939	515	133	63	110	113
30	1230	2000	958	519	---	257	758	425	127	61	100	110
31	1560	---	843	538	---	240	---	367	---	59	93	---
TOTAL	10108	60448	81570	35161	24237	10194	18858	18694	6597	2773	3435	6792
MEAN	326	2015	2631	1134	866	329	629	603	220	89.5	111	226
MAX	1560	12600	13500	3040	3000	458	1990	1780	413	133	300	700
MIN	71	315	640	519	401	240	228	320	127	59	50	80
CFSM	3.29	20.3	26.5	11.4	8.73	3.32	6.34	6.08	2.22	.90	1.12	2.28
IN.	3.79	22.67	30.59	13.19	9.09	3.82	7.07	7.01	2.47	1.04	1.29	2.55
AC-FT	20050	119900	161800	69740	48070	20220	37400	37080	13090	5500	6810	13470

CAL YR 1977 TOTAL 256264 MEAN 702 MAX 13500 MIN 29 CFSM 7.08 IN 96.10 AC-FT 508300
WTR YR 1978 TOTAL 278867 MEAN 764 MAX 13500 MIN 50 CFSM 7.70 IN 104.57 AC-FT 553100

NOTE.--No gage-height record Nov. 25 to Dec. 13, Aug. 8 to Sept. 13.

14185900 QUARTZVILLE CREEK NEAR CASCADIA, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1963 to November 1964, October 1965 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 25.5°C Aug. 10, 11, 1971; minimum, 0.0°C on several days in 1969, 1972, 1974, 1976, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 23.0°C Aug. 8; minimum, 1.5°C Nov. 20.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10.5	8.5	8.0	7.0	7.5	7.0	3.5	3.0	5.5	5.0	6.0	4.0
2	10.0	8.0	7.5	6.0	8.0	7.5	4.0	3.0	6.0	5.5	6.0	4.0
3	10.0	8.0	6.0	5.5	7.5	7.0	5.0	4.5	6.5	6.0	7.0	5.0
4	9.5	7.5	6.0	5.0	7.0	6.0	6.0	5.5	7.0	6.0	7.5	6.0
5	9.5	8.5	6.5	6.0	6.0	5.5	5.5	5.0	7.0	6.5	7.0	6.0
6	9.0	8.0	7.0	6.0	7.0	6.0	6.0	5.5	6.5	6.0	8.0	6.5
7	9.5	8.5	7.0	5.5	6.5	5.0	6.0	5.5	6.5	6.0	8.0	7.5
8	9.5	8.0	5.5	4.5	5.0	4.5	6.5	6.0	6.0	5.5	8.0	7.5
9	9.5	7.5	6.0	4.5	5.0	4.5	6.5	6.0	6.0	5.0	9.0	7.0
10	9.0	7.0	6.5	5.5	6.0	5.5	6.5	6.0	5.0	4.0	8.0	6.0
11	9.5	7.5	6.5	6.0	7.0	6.5	6.0	5.5	5.0	4.0	7.0	6.5
12	9.5	8.0	7.0	6.0	7.0	6.5	6.0	5.5	4.0	3.5	7.0	5.5
13	11.0	9.0	7.0	6.5	8.0	7.0	6.5	6.0	5.5	3.5	6.5	5.5
14	10.5	9.0	7.0	6.5	7.5	7.5	6.5	6.0	5.5	4.5	7.5	5.5
15	10.5	9.0	7.5	7.0	7.5	5.5	6.5	6.0	5.5	4.5	7.0	4.5
16	10.0	9.0	7.0	6.0	5.5	5.0	6.5	6.0	5.0	4.0	8.0	5.0
17	9.5	8.5	6.0	5.0	5.5	5.0	6.5	6.0	6.0	5.0	9.0	6.0
18	9.5	8.0	5.0	3.5	5.5	5.0	6.0	5.5	7.0	5.5	9.0	6.5
19	10.0	8.5	3.5	2.5	5.0	4.5	6.0	5.5	7.0	5.5	9.5	6.5
20	9.0	7.5	2.5	1.5	4.5	4.0	7.0	6.0	7.5	5.5	10.0	7.0
21	9.0	8.0	3.0	2.0	5.0	4.5	6.5	5.5	7.5	6.0	9.5	7.5
22	8.5	7.5	4.5	2.5	5.5	4.5	5.5	5.0	7.5	5.5	9.5	7.5
23	9.5	8.5	5.5	5.0	5.5	5.0	5.0	4.0	7.5	6.0	9.0	7.5
24	9.5	9.0	6.5	5.5	6.0	5.5	4.5	3.5	7.5	7.0	8.0	7.0
25	9.5	8.0	7.5	6.5	6.0	5.5	5.5	4.5	7.5	7.0	10.0	7.5
26	8.0	7.0	7.0	6.5	5.5	5.0	5.5	5.0	7.0	6.0	10.5	7.5
27	7.5	6.5	7.0	6.5	5.5	4.5	5.5	4.0	6.5	5.5	11.0	8.0
28	7.5	6.5	7.0	6.5	6.0	5.0	6.0	5.5	6.0	5.0	11.0	8.0
29	7.5	7.5	7.5	7.0	6.0	4.5	6.0	5.0	---	---	10.5	9.0
30	7.5	7.0	7.0	6.5	5.0	4.5	5.5	4.5	---	---	10.0	9.0
31	7.5	7.0	---	---	5.0	3.5	5.5	5.0	---	---	10.5	8.0
MONTH	11.0	6.5	8.0	1.5	8.0	3.5	7.0	3.0	7.5	3.5	11.0	4.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.5	7.5	9.0	7.0	14.5	9.5	16.5	15.0	20.5	16.0	16.5	14.0
2	7.5	6.0	8.5	6.5	15.0	10.5	15.0	13.5	21.0	16.5	18.0	16.0
3	8.5	6.0	8.5	6.5	16.0	11.5	13.5	13.0	22.0	18.0	16.5	15.0
4	7.5	6.5	8.5	6.0	17.0	12.5	16.5	12.5	21.5	19.0	15.0	13.5
5	7.5	6.0	8.5	5.5	18.0	13.5	17.0	13.0	21.0	17.0	13.5	13.0
6	8.0	5.5	10.5	5.5	17.0	14.0	18.0	14.0	21.5	17.0	13.5	12.5
7	8.0	5.5	11.5	6.5	17.0	13.0	19.0	15.5	22.5	18.0	---	---
8	9.0	6.0	12.5	7.5	17.0	13.5	18.5	16.0	23.0	19.5	---	---
9	10.0	5.5	11.0	9.5	15.5	13.0	16.5	15.0	22.5	18.5	---	---
10	11.0	7.0	9.5	8.5	12.5	11.0	15.0	13.5	21.0	18.0	---	---
11	10.0	7.0	8.5	7.5	15.0	10.5	17.5	12.5	20.5	18.5	---	---
12	9.0	5.5	8.5	7.0	14.0	12.0	18.5	14.0	19.0	16.5	---	---
13	7.0	6.0	8.5	7.5	12.5	11.0	20.0	15.5	16.5	15.5	11.0	---
14	8.0	6.5	8.0	7.0	11.5	10.5	21.0	16.5	17.5	15.0	12.5	10.5
15	7.5	6.5	8.0	6.5	11.5	9.5	19.0	16.5	16.5	15.0	12.5	11.0
16	6.5	6.0	8.5	6.5	13.0	10.0	16.5	15.0	15.5	14.0	11.5	9.0
17	7.0	5.5	10.0	7.0	15.5	10.0	18.0	14.0	14.5	13.0	10.5	9.5
18	9.0	6.0	11.5	7.0	14.5	12.5	19.0	14.5	16.5	12.5	9.5	8.5
19	7.5	6.5	12.5	8.5	16.5	11.5	19.5	15.0	15.5	15.0	11.0	8.5
20	7.5	6.0	14.0	9.5	17.0	13.5	20.5	16.0	15.0	14.0	11.5	9.0
21	6.0	5.0	12.0	9.0	16.0	14.0	21.0	16.5	14.0	13.0	12.0	10.5
22	5.5	5.0	10.0	8.0	17.0	13.0	21.0	17.0	14.0	12.5	11.0	10.0
23	8.0	5.5	10.5	7.5	15.5	13.0	22.0	18.0	13.5	12.5	13.0	10.0
24	8.5	6.0	10.0	7.5	13.5	12.0	22.0	18.0	13.5	12.5	13.0	11.0
25	7.5	6.5	10.5	7.5	13.0	12.0	22.0	18.0	13.5	11.0	13.5	12.0
26	7.0	6.5	9.5	8.0	16.0	12.0	21.0	19.0	14.5	11.0	13.5	12.0
27	7.5	6.5	9.5	8.5	18.0	13.5	21.0	17.0	15.0	11.5	13.5	12.5
28	8.0	6.5	10.0	8.5	16.5	14.5	20.5	17.0	16.5	13.0	13.0	11.5
29	10.0	6.5	12.0	7.5	15.5	14.5	21.5	17.0	17.5	14.5	13.0	11.0
30	8.0	7.0	12.5	7.5	18.0	14.0	21.5	17.5	17.0	15.5	12.5	12.0
31	---	---	13.0	8.5	---	---	21.0	17.0	15.5	15.0	---	---
MONTH	11.0	5.0	14.0	5.5	18.0	9.5	22.0	12.5	23.0	11.0	18.0	8.5

14186100 GREEN PETER LAKE NEAR FOSTER, OR

LOCATION.--Lat 44°27'10", long 122°32'40", in NE¼SE¼ sec.10, T.13 S., R.2 E., Linn County, Hydrologic Unit 17090006, in Green Peter Dam on Middle Santiam River 7.0 mi (11.3 km) northeast of Foster and at mile 5.7 (9.2 km).

DRAINAGE AREA.--273 mi^2 (707 km^2).

PERIOD OF RECORD.--October 1966 to current year. Prior to October 1971, published as Green Peter Reservoir near Foster.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by concrete, gravity-type dam with ogee spillway completed in 1966 by Corps of Engineers; controlled storage began Oct. 6, 1966. Total capacity, 428,100 acre-ft (528 hm^3) and usable capacity 330,800 acre-ft (408 hm^3) between elevations 887.0 ft (270.36 m), proposed lower limit of operation, and 1,015.0 ft (309.37 m), top of spillway gates. Reservoir used for flood control, power development, improvement of navigation, pollution abatement, and other purposes. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 417,700 acre-ft (515 hm^3) June 18, 1977, elevation, 1,012.17 ft (308.509 m); minimum, 116,900 acre-ft (144 hm^3) Dec. 15, 1972, elevation, 899.20 ft (274.076 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 409,200 acre-ft (505 hm^3) June 17, elevation, 1,009.82 ft (307.793 m); minimum, 162,100 acre-ft (200 hm^3) Jan. 27, elevation, 923.10 ft (281.361 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)

899	116,600	960	251,100
900	118,300	980	309,700
920	115,700	1,000	374,800
940	199,900	1,013	420,700

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	981.10	961.41	968.66	942.22	926.51	952.48	962.16	983.54	1006.52	1009.69	1004.86	998.52
2	980.37	963.03	971.29	940.01	929.72	952.83	962.58	984.27	1006.85	1009.73	1004.57	998.27
3	979.54	962.15	974.58	938.37	934.33	953.14	963.00	984.89	1007.15	1009.70	1004.32	998.03
4	978.68	960.64	973.42	937.53	936.73	953.46	963.48	985.50	1007.43	1009.70	1004.03	997.80
5	977.76	958.97	970.46	936.87	938.46	953.73	964.04	986.04	1007.60	1009.64	1003.78	997.63
6	976.64	957.43	969.38	938.08	940.07	953.99	964.55	986.52	1007.70	1009.58	1003.54	997.29
7	975.87	957.00	970.15	937.73	941.19	954.26	964.99	986.96	1007.80	1009.51	1003.17	996.97
8	974.92	956.07	967.08	936.92	942.16	954.62	965.35	987.36	1007.89	1009.44	1002.96	996.72
9	973.84	955.00	963.05	935.93	942.82	954.97	965.70	987.80	1008.00	1009.35	1002.58	996.62
10	972.67	953.71	958.66	934.71	943.18	955.27	966.08	988.23	1008.21	1009.23	1002.19	996.98
11	971.44	952.29	959.01	933.16	943.75	955.57	966.50	989.09	1008.41	1009.07	1001.80	997.50
12	970.14	950.82	960.83	931.98	944.16	955.82	966.88	989.98	1008.55	1008.94	1001.54	996.92
13	968.81	949.79	977.20	930.62	944.41	956.15	967.28	990.94	1008.74	1008.80	1001.28	996.13
14	967.45	951.02	988.56	929.11	944.95	956.56	967.67	992.71	1009.00	1008.63	1000.97	995.21
15	966.38	954.52	996.20	927.42	945.55	956.93	968.03	994.74	1009.42	1008.46	1000.79	994.20
16	966.19	954.52	997.71	925.60	946.05	957.26	968.45	996.48	1009.70	1008.30	1000.67	993.45
17	965.43	953.26	996.94	925.45	946.55	957.60	968.46	997.75	1009.62	1008.14	1000.55	992.73
18	964.38	951.51	994.15	925.67	947.04	957.93	968.57	998.74	1009.57	1008.01	1000.34	991.79
19	963.33	949.42	990.49	925.68	947.55	958.22	968.71	999.53	1009.43	1007.83	1000.14	990.86
20	962.33	947.08	985.65	925.50	947.99	958.50	968.87	1000.19	1009.46	1007.65	1000.06	989.87
21	961.77	944.63	979.78	925.85	948.34	958.77	969.41	1000.77	1009.54	1007.45	1000.00	988.93
22	961.22	944.53	973.68	926.22	948.72	959.02	970.72	1001.32	1009.58	1007.25	999.87	987.98
23	960.97	944.56	967.74	925.88	949.08	959.47	971.92	1001.80	1009.59	1007.04	999.79	987.18
24	960.07	949.60	964.00	925.14	949.47	959.95	973.04	1002.31	1009.66	1006.83	999.82	986.41
25	959.97	969.42	959.55	924.11	949.90	960.33	974.38	1002.77	1009.72	1006.58	999.94	985.56
26	959.58	977.95	953.68	923.47	950.81	960.68	976.81	1003.20	1009.71	1006.31	999.90	984.67
27	959.48	978.76	950.07	923.31	951.53	960.98	978.89	1003.87	1009.73	1006.09	999.78	983.89
28	958.69	976.86	948.31	923.73	952.05	961.25	980.47	1004.64	1009.73	1005.87	999.64	983.07
29	958.25	975.70	946.72	924.14	---	961.49	981.71	1005.24	1009.74	1005.65	999.47	982.26
30	958.86	972.47	946.10	924.42	---	961.73	982.69	1005.74	1009.74	1005.41	999.26	981.70
31	959.96	---	944.29	925.20	---	961.92	---	1006.16	---	1005.14	999.03	---
MEAN	967.62	957.80	969.92	930.00	944.04	957.25	969.38	995.13	1008.79	1008.03	1001.31	992.17
MAX	981.10	978.76	997.71	942.22	952.05	961.92	982.69	1006.16	1009.74	1009.73	1004.86	998.52
MIN	958.25	944.53	944.29	923.31	926.51	952.48	962.16	983.54	1006.52	1005.14	999.03	981.70
(†)	251,000	286,900	210,300	166,600	229,900	256,400	318,100	396,100	408,900	392,500	371,500	315,000
(‡)	-64,200	+35,900	-76,600	-43,700	+63,300	+26,500	+61,700	+78,000	+12,800	-16,400	-21,000	-56,500

CAL YR 1977 MEAN 972.38 MAX 1012.04 MIN 911.95 AC-FT‡ +62,600
WTR YR 1978 MEAN 975.30 MAX 1009.74 MIN 923.31 AC-FT‡ -200

† Contents, in acre-feet, at 2400, on last day of month.
‡ Change in contents, in acre-feet.

14186600 FOSTER LAKE AT FOSTER, OR

LOCATION.--Lat 44°25'00", long 122°40'25", in NW¼NE¼ sec.27, T.13 S., R.1 E., Linn County, Hydrologic Unit 17090006, in Foster Dam on South Santiam River, 0.3 mi (0.5 km) above Wiley Creek, 0.5 mi (0.8 km) north of Foster, and at mile 37.7 (60.7 km).

DRAINAGE AREA.--492 mi² (1,274 km²).

PERIOD OF RECORD.--December 1966 to current year. Prior to October 1971, published as Foster Reservoir at Foster.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by rockfill embankment with an impervious core and ogee spillway completed in 1966 by Corps of Engineers; controlled storage began in November 1966. Total capacity, 60,780 acre-ft (74.9 hm³) and usable capacity 33,210 acre-ft (40.9 hm³) between elevations 609.0 ft (185.52 m), proposed lower limit of operation, and 641.0 ft (195.38 m), top of spillway gates. Reservoir used for reregulation of water released from Green Peter Reservoir, flood control, power development, pollution abatement, and other purposes. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 60,090 acre-ft (74.1 hm³) Sept. 17, 1968, elevation, 640.45 ft (195.209 m); minimum, 26,590 acre-ft (32.8 hm³) Nov. 15, 16, 1971, elevation, 607.85 ft (185.273 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 57,140 acre-ft (70.5 hm³) Sept. 18, elevation, 638.05 ft (194.478 m); minimum, 29,650 acre-ft (36.6 hm³) Nov. 15, elevation, 611.40 ft (186.355 m).

Capacity table (elevation, in feet, and total contents, in acre-ft)

607	25,880	630	47,860
610	28,430	635	53,510
615	32,870	640	59,530
620	37,570	641	60,780
625	42,550		

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	637.16	621.09	613.10	613.10	614.07	616.43	617.03	625.02	636.95	636.69	636.98	637.17
2	637.04	621.18	612.97	613.10	614.07	616.85	616.96	625.04	636.91	636.66	637.05	637.01
3	637.03	620.34	613.07	613.12	613.86	617.21	616.88	625.07	636.80	636.73	636.91	636.92
4	636.99	619.80	613.05	613.11	614.20	617.56	616.80	625.13	636.65	636.67	636.92	636.87
5	637.12	619.15	613.14	613.06	614.47	617.91	616.87	625.02	636.67	636.71	636.80	636.96
6	637.24	618.20	613.29	613.07	614.66	618.05	617.00	624.94	636.78	636.72	636.66	637.15
7	637.15	617.45	612.97	613.03	615.18	618.08	617.00	624.77	636.84	636.69	636.92	637.18
8	637.10	617.10	613.06	613.04	615.17	618.08	616.93	624.53	636.88	636.65	636.64	637.23
9	637.18	616.51	613.05	613.04	614.84	618.14	616.81	624.37	636.93	636.61	636.86	637.48
10	637.18	615.95	613.04	613.03	615.25	618.03	616.72	624.23	637.12	636.67	636.72	637.19
11	637.06	615.30	612.99	613.05	614.91	618.14	616.70	624.73	637.26	636.81	636.73	636.72
12	637.09	614.60	613.03	613.51	615.08	618.00	616.61	625.74	637.30	636.73	636.84	637.00
13	637.13	613.92	614.20	613.72	614.86	618.07	616.54	626.55	637.22	636.66	636.99	637.20
14	637.17	613.54	613.09	613.07	614.99	618.18	616.44	627.98	637.15	636.69	637.09	637.14
15	636.77	613.06	612.67	613.06	614.99	618.25	616.36	630.88	637.00	636.73	637.18	637.10
16	635.24	613.04	613.19	613.13	614.99	618.29	616.35	633.68	637.08	636.97	637.25	637.21
17	634.67	613.00	613.14	614.23	615.11	618.30	617.73	635.51	636.97	637.06	637.15	637.32
18	633.76	613.01	613.17	615.06	615.17	618.29	618.93	636.67	637.13	637.00	637.00	637.86
19	632.28	613.01	613.21	614.16	615.00	618.23	620.39	637.00	637.35	637.01	636.87	637.52
20	631.30	613.03	613.12	614.20	615.19	618.14	621.88	637.01	637.16	637.02	636.81	636.95
21	629.77	613.35	613.09	614.26	615.01	618.04	623.07	636.96	637.07	637.01	636.80	636.80
22	628.19	612.77	613.07	614.07	615.18	617.95	623.95	637.03	637.01	636.97	637.16	636.96
23	625.66	613.10	613.08	614.18	615.07	618.03	625.04	637.03	637.07	636.91	637.21	636.92
24	625.39	613.29	613.29	614.20	615.01	618.23	625.47	636.97	637.03	636.87	637.21	636.79
25	625.04	618.45	613.06	614.45	615.12	618.26	625.25	636.89	637.05	636.98	637.39	636.85
26	624.55	613.47	613.10	614.34	615.10	616.20	625.41	636.90	637.13	637.05	637.32	636.14
27	623.44	613.11	613.07	614.30	615.42	618.09	625.01	636.96	637.04	637.01	637.19	637.27
28	623.20	613.08	613.07	614.12	615.92	617.93	625.02	637.15	636.93	636.97	637.02	637.37
29	622.73	613.19	613.03	614.16	---	617.74	625.04	637.14	636.83	636.93	636.84	637.47
30	622.20	613.06	613.56	614.15	---	617.55	625.09	637.09	636.71	636.87	636.79	637.47
31	621.89	---	613.18	613.96	---	617.30	---	636.93	---	636.93	636.70	---
MEAN	632.12	615.31	613.13	613.68	614.92	617.92	619.84	631.32	637.00	636.84	636.97	637.11
MAX	637.24	621.18	614.20	615.06	615.92	618.30	625.47	637.15	637.35	637.06	637.39	637.86
MIN	621.89	612.77	612.67	613.03	613.86	616.43	616.35	624.23	636.65	636.61	636.64	636.14
(†)	39,410	31,120	31,230	31,930	33,720	35,000	42,640	55,790	55,530	55,790	55,520	56,440
(‡)	-16,910	-8,290	+110	+700	+1,790	+1,280	+7,640	+13,150	-260	+260	-270	+920

CAL YR 1977 MEAN 628.34 MAX 638.20 MIN 612.59 AC-FT‡ +80
WTR YR 1978 MEAN 625.58 MAX 637.86 MIN 612.67 AC-FT‡ +120

† Contents, in acre-feet, at 2400, on last day of month.
‡ Change in contents, in acre-feet.

14187100 WILEY CREEK AT FOSTER, OR

LOCATION.--Lat 44°23'55", long 122°39'35", in SW¼NW¼ sec.35, T.13 S., R.1 E., Linn County, Hydrologic Unit 17090006, on right bank 1.5 mi (2.4 km) downstream from Jackson Creek, 1.0 mi (1.6 km) southeast of Foster, and at mile 1.4 (2.3 km).

DRAINAGE AREA.--62.3 mi² (161.4 km²).

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 590 ft (179.8 m), from topographic map. Prior to May 2, 1974, at present site at datum 5.00 ft (1.524 m) lower.

REMARKS.--Records fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--5 years, 243 ft³/s (6.882 m³/s), 52.97 in/yr (1,345 mm/yr), 176,100 acre-ft/yr (217 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,320 ft³/s (179 m³/s) Jan. 15, 1974, gage height, 9.28 ft (2.829 m); minimum, 3.1 ft³/s (0.088 m³/s) Oct. 19, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,300 ft³/s (65.1 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	1900	3,690	105	8.19	2.496	Dec. 13	1700	*3,880	110	*8.30	2.530

Minimum, 12 ft³/s (0.34 m³/s) Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	224	511	247	329	130	78	290	108	43	17	27
2	41	328	809	227	714	122	138	243	97	46	16	24
3	39	227	1200	261	1050	116	172	211	83	47	16	24
4	36	167	849	297	850	118	157	203	80	46	16	27
5	34	180	661	903	670	114	200	181	80	44	16	53
6	37	193	742	1250	490	115	211	159	71	40	15	66
7	47	193	1080	919	400	115	188	138	64	39	15	62
8	45	167	839	670	390	130	169	124	60	39	14	57
9	40	144	618	543	390	150	154	130	59	37	13	92
10	38	123	511	467	360	142	146	162	85	35	13	195
11	35	108	992	392	310	137	134	354	81	33	12	178
12	34	100	1140	416	270	136	124	329	65	32	16	122
13	33	131	2070	398	230	134	115	282	80	31	26	99
14	32	270	2570	375	190	140	115	552	75	28	20	93
15	31	550	2690	344	170	132	108	829	106	28	32	79
16	31	422	1580	398	155	128	128	696	83	37	43	66
17	30	290	1380	584	150	118	157	488	71	36	55	69
18	30	233	1010	601	150	113	149	370	63	31	31	78
19	29	187	733	535	150	105	149	290	59	28	24	66
20	28	156	511	447	150	99	172	250	56	27	31	57
21	28	140	392	488	147	94	203	211	53	24	42	52
22	27	609	319	609	145	90	519	190	51	22	73	48
23	33	651	354	480	140	142	381	174	50	22	57	45
24	41	748	839	386	138	159	324	162	54	21	57	43
25	108	2050	714	329	140	130	334	162	53	20	90	42
26	162	1750	495	301	150	117	919	157	50	19	54	39
27	99	1040	381	282	140	108	770	188	47	20	43	38
28	75	751	305	250	136	100	568	195	45	20	36	37
29	70	839	301	240	---	96	422	172	44	20	32	35
30	158	661	324	221	---	94	334	149	43	19	29	34
31	260	---	282	224	---	89	---	124	---	18	28	---
TOTAL	1775	13632	27202	14084	8704	3713	7738	8165	2016	952	982	1947
MEAN	57.3	454	877	454	311	120	258	263	67.2	30.7	31.7	64.9
MAX	260	2050	2690	1250	1050	159	919	829	108	47	90	195
MIN	27	100	282	221	136	89	78	124	43	18	12	24
CFSM	.92	7.29	14.1	7.29	4.99	1.93	4.14	4.22	1.08	.49	.51	1.04
IN.	1.06	8.14	16.24	8.41	5.20	2.22	4.62	4.88	1.20	.57	.59	1.16
AC-FT	3520	27040	53960	27940	17260	7360	15350	16200	4000	1890	1950	3860

CAL YR 1977 TOTAL 77914.9 MEAN 213 MAX 2690 MIN 6.8 CFSM 3.42 IN 46.52 AC-FT 154500
WTR YR 1978 TOTAL 90910.0 MEAN 249 MAX 2690 MIN 12 CFSM 4.00 IN 54.28 AC-FT 180300

NOTE.--No gage-height record Feb. 4 to Mar. 14.

14187200 SOUTH SANTIAM RIVER NEAR FOSTER, OR

LOCATION.--Lat 44°24'45", long 122°41'15", in SE¼NE¼ sec.28, T.13 S., R.1 E., Linn County, Hydrologic Unit 17090006, on left bank 0.6 mi (1.0 km) downstream from Wiley Creek and at mile 37.0 (59.5 km).

DRAINAGE AREA.--557 mi^2 (1,443 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1973 to current year. Records for October 1966 to July 1973 (published as South Santiam River at Foster, station 14186700) at site 0.5 mi (0.8 km) upstream not equivalent owing to inflow between sites.

GAGE.--Water-stage recorder. Altitude of gage is 560 ft (171 m), from topographic map.

REMARKS.--Water-discharge records good. Flow regulated since October 1966 by Green Peter Lake (see station 14186100) and since December 1966 by Foster Lake (see station 14186600). No diversion above station.

AVERAGE DISCHARGE.--5 years, 3,121 ft^3/s (88.39 m^3/s), 2,261,000 acre-ft/yr (2.79 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft^3/s (479 m^3/s) Jan. 15, 1974; maximum gage height, 16.16 ft (4.926 m) Dec. 24, 1977; minimum discharge, 425 ft^3/s (12.0 m^3/s) July 26, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,800 ft^3/s (476 m^3/s) Dec. 24, gage height, 16.16 ft (4.926 m); minimum, 595 ft^3/s (16.9 m^3/s) June 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2500	3820	13000	6150	1990	1050	951	1660	793	707	741	1060
2	2340	5680	13000	6020	3150	1030	1010	1400	784	724	741	941
3	2220	6480	13300	6120	5870	1040	1040	1230	767	724	784	912
4	2190	5750	14400	6430	4310	1050	1070	1130	767	732	767	912
5	2070	5800	13800	7700	3690	1040	1080	1130	767	724	776	931
6	2620	5720	13900	9150	3570	1120	1090	1020	750	699	776	1330
7	2910	3760	12600	7980	3780	1180	1070	1000	741	699	776	1460
8	2860	3940	13800	7370	4140	1330	1040	970	732	699	776	1460
9	2690	3900	13100	7000	4020	1440	1030	960	732	691	776	1550
10	2720	3900	12800	6970	3310	1420	1020	1000	784	691	990	2340
11	2770	3900	12900	6630	2840	1310	1010	1160	802	682	903	2760
12	2670	3880	12400	6500	2400	1420	875	1220	793	758	811	3060
13	2670	3840	13600	6550	2430	1290	750	1170	811	758	820	2980
14	2660	5130	14100	6860	1700	1060	750	1370	811	767	811	3080
15	2420	8290	14200	6400	1680	1020	741	1680	980	758	829	2980
16	1640	8070	13500	6480	1560	1010	758	1560	784	767	960	2310
17	1990	6860	14900	5360	1480	1000	784	1380	1400	767	1000	2300
18	2580	6330	14400	5080	1490	1000	793	1270	1090	750	884	2760
19	2840	5950	13400	5950	1560	990	811	1430	1120	758	838	3100
20	2460	5630	13900	5290	1490	980	638	1420	960	758	856	3170
21	2100	5410	14400	5480	1700	970	903	1240	784	758	866	2710
22	2100	6400	14100	5920	1430	960	1070	1070	741	767	903	2420
23	2260	7730	14100	5360	1520	1010	1090	1050	741	767	912	2230
24	2190	10300	16000	5020	1420	1040	1310	1040	741	758	941	2210
25	2560	13600	16200	4720	1300	1010	1650	1050	750	741	1020	2130
26	3010	13100	15200	4210	1540	1000	4100	1010	741	741	980	1970
27	2980	11400	10500	3240	1290	990	4000	1040	732	741	970	1900
28	2530	12200	6500	2540	1100	980	2820	1160	707	741	941	1900
29	2190	13800	6500	2390	---	970	2220	1130	707	741	922	1890
30	2760	14100	4920	2360	---	1010	1880	1020	699	741	922	1480
31	3550	---	6530	1850	---	1040	---	990	---	741	931	---
TOTAL	78050	214670	395950	175080	67760	33760	39754	36960	24511	22850	26923	62236
MEAN	2518	7156	12770	5648	2420	1089	1325	1192	817	737	868	2075
MAX	3550	14100	16200	9150	5870	1440	4100	1680	1400	767	1020	3170
MIN	1640	3760	4920	1850	1100	960	741	960	699	682	741	912
AC-FT	154800	425800	785400	347300	134400	66960	78850	73310	48620	45320	53400	123400

CAL YR 1977 TOTAL 1043747 MEAN 2860 MAX 16200 MIN 543 AC-FT 2070000
WTR YR 1978 TOTAL 1178504 MEAN 3229 MAX 16200 MIN 682 AC-FT 2338000

14187200 SOUTH SANTIAM RIVER NEAR FOSTER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: July 1973 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 15.5°C July 23-25, 1975, June 1, 4-7, 27, 1978; minimum, 3.0°C Jan. 7, 12, 13, 1974, Feb. 6, 1976.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 15.5°C June 1, 4-7, 27; minimum, 5.0°C Jan. 2, Feb. 16.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.0	11.0	9.5	9.0	8.5	8.0	6.5	5.5	7.5	6.5	7.0	5.5
2	12.0	11.0	9.0	8.0	9.0	8.5	6.0	5.0	7.5	6.5	7.5	6.0
3	11.5	10.5	9.0	8.0	9.0	8.5	6.5	5.5	8.0	7.0	8.0	7.0
4	11.5	10.0	9.0	7.5	8.5	8.0	7.0	6.0	8.5	7.0	7.5	7.0
5	11.0	10.5	9.0	8.5	8.0	7.5	7.0	6.0	8.5	7.5	8.0	7.0
6	11.0	10.5	9.5	8.5	8.5	8.0	7.0	6.5	8.0	7.0	8.5	7.5
7	11.0	10.5	9.5	8.0	8.0	7.5	7.5	6.5	8.0	7.5	8.5	8.0
8	11.0	10.0	8.5	7.5	7.5	7.0	7.5	7.0	7.5	7.0	8.5	8.0
9	11.0	10.0	9.0	8.0	7.5	7.0	7.5	7.0	7.5	6.5	8.5	7.5
10	10.5	10.0	9.0	8.0	8.0	7.5	7.5	7.0	7.0	6.0	8.5	7.0
11	10.5	10.0	9.0	8.5	8.0	7.5	7.5	6.5	7.0	6.0	8.0	7.5
12	10.5	10.0	9.5	8.5	8.0	7.5	7.5	6.5	6.5	5.5	9.0	7.5
13	10.5	10.0	9.5	8.5	9.0	8.0	7.5	7.0	6.5	5.5	8.5	7.5
14	10.5	10.0	9.5	8.5	9.0	8.5	7.5	7.0	7.0	6.0	9.0	7.0
15	10.0	9.5	9.0	8.5	9.0	7.5	7.5	7.0	6.5	6.0	8.5	6.5
16	10.0	9.0	9.0	8.5	7.5	7.5	8.0	7.0	6.5	5.0	9.5	7.0
17	10.0	9.0	8.5	8.0	7.5	7.0	8.0	7.5	7.5	6.0	10.0	7.5
18	10.0	9.5	8.0	7.5	7.5	6.5	7.5	6.5	8.0	6.5	10.5	8.0
19	10.5	9.5	8.0	6.5	7.0	6.5	7.5	7.0	8.0	6.0	10.5	8.5
20	10.0	9.5	7.5	6.5	7.0	6.5	8.0	7.0	8.0	6.5	11.0	8.5
21	10.0	9.5	7.5	6.5	7.0	6.5	8.0	7.5	8.0	7.0	10.0	9.0
22	10.0	9.5	7.0	6.0	7.5	6.5	7.5	7.0	8.0	7.0	10.5	9.0
23	10.0	9.5	8.0	7.0	7.5	7.0	7.0	6.0	8.0	7.0	10.5	9.0
24	10.5	9.5	8.5	7.5	7.5	7.0	6.5	5.5	8.5	7.5	10.0	9.0
25	10.0	10.0	9.5	8.5	7.5	6.5	7.0	5.5	8.5	7.5	11.0	9.5
26	10.0	9.0	8.5	8.0	7.5	6.5	7.5	6.5	8.0	7.5	11.0	9.5
27	10.0	9.0	8.5	7.5	7.0	6.0	7.0	6.0	8.0	7.0	11.5	9.5
28	10.0	9.0	8.0	7.5	7.0	6.0	7.5	6.5	8.0	6.0	10.5	9.5
29	10.0	9.0	8.5	8.0	7.0	6.5	7.5	6.5	---	---	11.0	10.0
30	9.5	8.5	8.5	8.0	7.0	6.0	7.0	6.0	---	---	11.0	10.0
31	9.5	8.5	---	---	7.0	6.0	7.5	6.5	---	---	10.5	9.5
MONTH	12.0	8.5	9.5	6.0	9.0	6.0	8.0	5.0	8.5	5.0	11.5	5.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.0	9.5	10.5	9.0	15.5	11.5	13.5	13.0	14.5	12.0	14.0	12.5
2	10.0	9.0	10.5	9.0	15.0	12.0	13.5	12.5	14.5	12.5	14.0	12.5
3	11.5	8.5	11.5	9.0	15.0	12.0	13.0	12.5	15.0	12.5	14.0	12.5
4	10.5	9.0	10.5	9.0	15.5	12.5	13.5	12.5	14.5	13.0	13.0	12.5
5	10.0	8.5	11.0	8.5	15.5	13.0	15.0	12.0	14.5	12.5	13.0	12.5
6	9.5	7.5	12.0	8.5	15.5	13.0	15.0	12.5	15.0	12.5	13.5	13.0
7	10.5	8.0	12.5	9.5	15.5	12.5	15.0	13.0	15.0	13.0	13.5	12.5
8	10.5	8.0	12.5	10.0	15.0	12.5	14.0	13.0	15.0	13.0	13.5	12.0
9	11.5	8.5	12.0	10.5	14.0	13.0	14.0	12.5	14.5	13.0	13.0	12.5
10	12.0	9.5	11.0	10.0	13.5	12.5	14.5	12.5	14.0	13.0	13.0	12.5
11	11.5	9.0	11.5	9.5	15.0	12.0	14.5	12.5	14.0	12.5	13.5	12.0
12	11.5	8.5	11.0	9.0	13.5	12.5	14.5	12.0	13.5	12.5	13.0	12.5
13	10.5	9.0	11.0	10.0	13.5	12.5	15.0	12.0	13.5	13.0	13.0	12.0
14	10.5	9.5	11.0	9.5	13.5	12.0	15.0	12.5	14.0	12.5	12.5	12.0
15	9.5	9.0	11.0	9.0	14.5	12.0	13.5	12.5	14.0	12.5	12.5	12.0
16	10.0	9.0	11.5	9.0	14.5	12.0	14.0	12.5	13.5	12.5	12.0	11.0
17	10.5	8.5	12.5	9.0	14.5	12.0	14.5	12.5	14.0	12.5	12.0	11.0
18	11.5	9.5	14.0	9.0	13.5	12.5	14.5	12.5	14.5	12.5	12.0	11.5
19	11.0	9.0	13.5	10.5	14.5	12.5	15.0	12.5	13.5	13.0	12.0	11.0
20	10.0	8.5	14.5	11.0	14.5	12.0	15.0	12.5	13.5	13.0	12.5	11.5
21	9.5	8.5	12.0	10.0	13.5	12.5	15.0	12.5	13.5	13.0	12.0	11.0
22	9.0	7.5	11.5	9.5	14.0	12.0	14.5	13.0	14.0	13.0	12.0	11.0
23	10.5	7.5	11.5	9.5	13.5	12.5	15.0	13.0	13.5	12.5	12.0	11.0
24	11.0	8.5	11.5	10.0	14.0	12.0	15.0	12.5	13.5	12.5	11.5	11.0
25	10.0	9.5	12.0	10.0	13.5	12.5	15.0	12.5	13.5	12.5	11.5	11.0
26	9.5	9.0	11.0	11.0	15.0	12.5	14.0	13.0	14.0	12.0	11.5	11.0
27	9.5	9.0	11.5	11.0	15.5	12.0	14.5	12.5	14.0	12.0	11.5	11.0
28	10.5	9.0	12.0	11.0	15.0	12.5	14.0	12.5	14.0	12.5	11.0	11.0
29	11.5	8.5	13.0	10.0	13.5	12.5	14.5	12.0	14.0	12.0	11.0	11.0
30	10.0	9.5	13.0	10.0	14.5	12.5	14.5	12.5	13.5	12.5	11.0	10.5
31	---	---	15.0	10.5	---	---	14.5	12.0	13.5	12.5	---	---
MONTH	12.0	7.5	15.0	8.5	15.5	11.5	15.0	12.0	15.0	12.0	14.0	10.5

14187500 SOUTH SANTIAM RIVER AT WATERLOO, OR

LOCATION.--Lat 44°29'55", long 122°49'20", in SW¼NW¼ sec.28, T.12 S., R.1 W., Linn County, Hydrologic Unit 17090006, on left bank 0.1 mi (0.2 km) downstream from highway bridge at Waterloo, 2.1 mi (3.4 km) upstream from Hamilton Creek, and at mile 23.3 (37.5 km).

DRAINAGE AREA.--640 mi^2 (1,658 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1905 to March 1907, October 1910 to December 1911 (gage heights only January to December 1911), July 1923 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as South Fork of Santiam River at Waterloo 1905-7, 1910-11.

REVISED RECORDS.--WSP 1248: 1907, 1924-30, 1932.

GAGE.--Water-stage recorder. Datum of gage is 370.39 ft (112.895 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 31, 1911, nonrecording gage at site 0.5 mi (0.8 km) downstream at datum about 5.0 ft (1.52 m) lower. July 1, 1923, to Nov. 12, 1934, nonrecording gage, at present site and datum.

REMARKS.--Water-discharge records excellent. Flow regulated since October 1966 by Green Peter Lake (see station 14186100) and since December 1966 by Foster Lake (see station 14186600). No diversion above station.

AVERAGE DISCHARGE.--56 years (water years 1906, 1924-78), 2,944 ft^3/s (83.37 m^3/s), 2,133,000 acre-ft/yr (2.63 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,200 ft^3/s (2,696 m^3/s) Dec. 22, 1964, gage height, 24.50 ft (7.468 m); minimum, 61 ft^3/s (1.73 m^3/s) Oct. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,800 ft^3/s (476 m^3/s) Nov. 25, Dec. 15, gage height, 9.47 ft (2.886 m); minimum, 609 ft^3/s (17.2 m^3/s) June 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2560	3960	12900	6180	2140	1090	984	1870	880	693	693	962
2	2430	5370	12900	6040	3360	1060	1080	1550	810	721	693	951
3	2270	6640	13300	6180	5960	1060	1130	1340	790	721	740	880
4	2260	5770	14300	6520	4730	1070	1110	1260	780	721	731	890
5	2120	5800	13600	7650	3960	1060	1150	1230	780	712	740	920
6	2590	5890	13600	10000	3800	1130	1180	1090	760	693	731	1220
7	2960	3900	12900	8410	3960	1150	1150	1070	740	683	731	1390
8	2940	4000	13400	7620	4420	1350	1120	1030	731	683	731	1410
9	2770	3960	12800	7150	4180	1460	1080	1030	731	674	731	1460
10	2790	3960	12500	7050	3630	1440	1070	1060	790	674	890	2300
11	2860	3940	13000	6710	3060	1350	1050	1200	840	674	900	2660
12	2740	3920	12600	6660	2640	1420	951	1330	800	712	780	3060
13	2740	3920	14100	6490	2590	1350	820	1270	830	731	800	2980
14	2740	4710	15400	6970	1940	1160	810	1530	830	721	780	3080
15	2580	8160	16100	6470	1840	1080	800	2060	910	740	810	2990
16	1720	8240	14500	6490	1690	1060	840	1880	850	750	910	2380
17	1940	6890	16200	5750	1590	1050	860	1600	1320	750	1010	2270
18	2560	6400	15000	5310	1570	1040	880	1440	1110	731	880	2660
19	2910	6010	13700	6060	1650	1030	910	1510	1090	731	810	3030
20	2640	5630	13700	5510	1520	1010	940	1460	995	721	830	3130
21	2170	5510	14200	5630	1780	995	1010	1390	800	721	840	2770
22	2150	6440	13900	6110	1500	984	1240	1150	740	731	880	2430
23	2320	8130	13700	5600	1530	1060	1330	1120	731	731	900	2210
24	2260	10400	15600	5170	1480	1080	1330	1090	740	721	920	2170
25	2610	14700	15900	4890	1350	1040	1840	1120	750	702	1020	2110
26	3110	14000	14800	4480	1590	1020	4300	1070	731	712	951	1970
27	3110	11800	10900	3450	1420	1010	4480	1110	721	702	930	1850
28	2720	12200	6490	2840	1150	995	3180	1180	702	702	910	1850
29	2270	13800	6470	2540	---	995	2510	1180	693	702	880	1870
30	2770	14100	5090	2540	---	984	2080	1090	693	693	870	1480
31	3570	---	6610	2090	---	984	---	1030	---	693	880	---
TOTAL	80180	218150	400160	180560	72030	34567	43215	40340	24668	22046	25902	61333
MEAN	2586	7272	12910	5825	2573	1115	1441	1301	822	711	836	2044
MAX	3570	14700	16200	10000	5960	1460	4480	2060	1320	750	1020	3130
MIN	1720	3900	5090	2090	1150	984	800	1030	693	674	693	880
AC-FT	159000	432700	793700	358100	142900	68560	85720	80010	48930	43730	51380	121700

CAL YR 1977 TOTAL 1068177 MEAN 2927 MAX 16200 MIN 531 AC-FT 2119000
WTR YR 1978 TOTAL 1203151 MEAN 3296 MAX 16200 MIN 674 AC-FT 2386000

14187500 SOUTH SANTIAM RIVER AT WATERLOO, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 26.0°C Aug. 4, 1966; minimum, 1.5°C Dec. 18-20, 1965.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 19.0°C June 28, July 14, 20, 21, 23, Aug. 7; minimum, 5.0°C Feb. 16.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	10.5	10.0	9.5	8.5	8.5	6.0	5.5	7.0	6.5	7.5	6.0
2	11.5	10.0	9.5	8.5	9.0	8.5	6.0	5.5	7.0	6.5	8.0	6.0
3	12.0	10.0	9.0	8.5	9.0	8.5	6.0	5.5	7.0	6.5	8.0	7.0
4	12.0	10.0	9.0	8.5	8.5	8.5	6.5	6.0	7.5	6.5	8.0	7.0
5	12.0	10.0	9.5	9.0	8.5	8.5	6.5	6.5	8.0	7.0	8.0	7.0
6	11.5	9.5	9.5	9.0	8.5	8.5	6.5	6.5	7.5	7.0	9.0	7.5
7	11.5	10.5	9.5	8.5	8.5	8.0	6.5	6.5	7.5	7.0	8.5	8.0
8	11.5	10.0	9.5	8.5	8.0	7.5	7.0	6.5	7.5	7.0	9.0	8.0
9	12.0	9.5	9.5	8.5	8.0	7.5	7.0	7.0	7.0	6.5	9.0	7.5
10	12.0	9.0	10.0	9.0	8.0	8.0	7.0	6.5	6.5	6.0	9.0	6.5
11	11.5	9.0	9.5	8.5	8.5	8.0	6.5	6.5	7.0	6.0	8.0	7.5
12	12.0	9.5	9.5	8.5	8.0	8.0	7.0	6.5	6.0	5.5	9.0	7.0
13	11.0	9.5	10.0	9.5	9.0	8.0	7.0	6.5	6.5	5.5	9.5	7.5
14	11.0	9.5	9.5	9.5	9.0	8.5	7.0	6.5	6.5	5.5	9.5	7.0
15	11.5	9.5	9.5	9.0	9.0	8.0	7.5	7.0	6.5	6.0	9.0	6.5
16	11.0	9.0	9.5	9.0	8.0	7.5	7.0	7.0	6.5	5.0	10.5	7.0
17	11.0	9.0	9.5	8.5	7.5	7.0	7.5	7.0	7.0	6.0	11.0	8.0
18	11.0	9.0	8.5	8.0	7.5	7.5	7.0	6.5	8.0	6.5	11.5	8.5
19	11.5	9.0	8.5	7.5	7.5	7.0	7.0	6.5	8.0	6.0	11.5	8.5
20	10.5	9.0	8.0	7.0	7.0	7.0	7.5	7.0	7.5	6.5	11.5	8.5
21	11.5	9.5	7.5	7.0	7.5	7.0	7.5	7.0	7.5	7.0	11.0	9.0
22	11.0	9.5	7.5	6.5	7.5	7.0	7.0	6.5	7.5	7.0	11.0	8.5
23	11.0	10.0	8.0	7.5	7.5	7.5	6.5	6.0	8.5	7.5	11.0	9.5
24	11.5	10.0	8.5	8.0	7.5	7.5	6.5	6.0	8.5	7.5	10.0	9.0
25	10.5	9.5	8.5	8.0	7.5	7.0	6.5	6.0	8.5	7.5	12.5	9.5
26	10.5	9.5	8.5	8.0	7.0	7.0	6.5	6.0	8.5	7.5	12.0	9.5
27	10.0	9.0	8.5	8.0	7.0	7.0	7.0	6.0	8.0	6.5	11.5	9.0
28	10.0	9.5	8.0	8.0	7.0	6.5	6.5	6.0	8.0	6.0	11.5	9.5
29	10.0	9.5	8.5	8.0	7.0	6.5	7.0	6.5	---	---	11.5	9.5
30	9.5	9.0	8.5	8.5	7.0	6.5	7.0	6.0	---	---	11.5	10.0
31	9.5	9.0	---	---	7.0	6.0	7.0	6.0	---	---	11.0	9.0
MONTH	12.5	9.0	10.0	8.5	9.0	6.0	7.5	5.5	8.5	5.0	12.5	6.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.5	9.0	11.0	9.0	17.0	13.0	16.5	14.0	17.5	14.5	16.0	12.5
2	10.0	9.0	11.5	9.0	17.5	14.0	15.0	13.5	18.0	15.0	15.5	13.0
3	11.5	8.5	11.5	9.0	17.5	14.0	14.0	13.5	18.0	15.5	15.0	13.0
4	11.0	10.0	11.0	9.0	18.5	14.5	15.0	13.0	17.5	15.5	13.0	12.5
5	10.5	9.0	11.5	8.5	18.5	15.0	17.5	13.5	18.0	14.0	13.0	12.0
6	10.0	8.0	13.0	8.5	18.0	15.0	18.0	15.0	18.5	15.0	13.5	12.0
7	11.5	7.5	14.0	9.5	18.0	14.5	18.0	15.5	19.0	15.5	13.5	12.0
8	11.5	8.5	14.5	10.5	18.0	15.0	17.0	15.0	18.5	16.0	13.0	11.5
9	12.5	8.5	13.5	10.5	16.5	15.0	15.5	14.0	18.5	15.5	13.0	12.5
10	13.0	9.5	11.5	10.0	15.0	13.0	16.5	13.5	17.5	15.0	13.5	12.0
11	12.5	9.5	12.5	10.0	18.0	12.5	17.5	14.0	16.5	14.0	13.5	12.0
12	12.0	8.5	11.5	10.0	16.5	14.0	18.0	14.5	15.5	13.5	14.5	11.5
13	11.0	9.0	11.5	10.5	15.5	13.0	18.5	15.0	15.5	13.0	12.0	11.5
14	11.0	9.0	11.5	10.5	15.0	13.0	19.0	16.0	17.0	13.0	13.5	11.5
15	10.5	9.0	12.0	9.5	15.5	13.0	18.0	14.0	16.0	13.5	12.5	11.5
16	10.5	8.5	12.0	9.5	17.0	13.0	16.0	13.5	14.5	13.5	13.0	10.5
17	10.0	9.0	13.5	9.5	17.0	12.5	17.0	14.0	16.0	12.5	12.0	10.0
18	12.5	10.0	14.5	9.5	15.5	13.0	17.5	14.5	16.5	13.0	12.0	10.0
19	11.5	10.0	15.0	11.0	17.0	13.0	18.5	15.0	16.0	14.5	13.0	10.5
20	11.0	9.0	15.5	11.5	16.0	13.5	19.0	16.0	14.5	13.0	12.5	10.0
21	10.0	9.0	14.0	11.0	15.5	13.5	19.0	16.0	14.0	13.5	12.0	10.5
22	10.0	8.5	13.0	10.0	15.5	13.0	18.5	16.0	14.5	13.0	12.0	10.0
23	10.5	7.5	13.0	10.0	15.0	14.0	19.0	15.5	14.0	13.0	13.5	10.0
24	11.5	9.5	12.5	10.5	15.5	13.0	18.5	15.5	14.0	12.5	13.0	10.0
25	10.5	9.5	12.5	10.0	14.5	13.5	18.5	15.5	14.5	12.0	12.5	10.0
26	10.0	9.0	12.5	11.0	17.5	13.5	18.0	16.0	16.0	12.0	13.0	10.0
27	10.0	9.0	13.0	10.5	18.5	15.0	16.5	13.5	16.0	12.5	12.0	10.5
28	11.0	9.0	13.0	11.0	19.0	16.0	16.0	14.0	16.5	13.0	12.5	9.5
29	12.0	8.5	14.5	10.5	17.5	14.5	18.0	14.0	16.5	13.5	12.5	9.5
30	11.0	9.0	15.0	10.5	17.5	14.0	18.0	15.5	15.5	13.5	11.5	10.0
31	---	---	16.0	11.0	---	---	17.5	15.0	13.5	13.0	---	---
MONTH	13.0	7.5	16.0	8.5	19.0	12.5	19.0	13.0	19.0	12.0	16.0	9.5

14188800 THOMAS CREEK NEAR SCIO, OR

LOCATION.--Lat 44°42'42", long 122°45'55", in SE¼SE¼ sec.11, T.10 S., R.1 W., Linn County, Hydrologic Unit 17090006, on left bank 0.3 mi (0.5 km) upstream from bridge on State Highway 226, 1.6 mi (2.6 km) upstream from Mill Creek, 4.2 mi (6.8 km) east of Scio, and at mile 14.6 (23.5 km).

DRAINAGE AREA.--109 mi^3 (282 km^2).

PERIOD OF RECORD.--October 1962 to current year.

REVISED RECORDS.--WRD Oreg. 1971: 1965(P), 1966(P), 1969(P).

GAGE.--Water-stage recorder. Datum of gage is 380.84 ft (116.080 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. No regulation. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.--16 years, 508 ft^3/s (14.39 m^3/s), 63.29 in/yr (1,608 mm/yr), 368,000 acre-ft/yr (454 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft^3/s (776 m^3/s) Dec. 22, 1964, gage height, 18.44 ft (5.621 m), from rating curve extended above 7,200 ft^3/s (204 m^3/s), on basis of slope-area measurement of peak flow; maximum gage height, 19.58 ft (5.968 m) Jan. 21, 1972, backwater from debris; minimum discharge, 7.8 ft^3/s (0.22 m^3/s) Aug. 20, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft^3/s (99.1 m^3/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
Nov. 25	1830	7,960	225	11.16	3.402	Dec. 13	-	*8,540	242	*11.51a	3.508
Dec. 2	1900	5,420	153	9.43	2.874						

Minimum, 18 ft^3/s (0.51 m^3/s) Aug. 9.

a From high-water mark in well.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	194	700	886	730	800	380	184	588	254	94	29	56
2	160	1160	2450	700	1250	365	250	510	233	105	29	54
3	139	738	2480	680	1300	330	298	448	210	106	29	56
4	121	544	1800	850	1060	310	290	414	194	107	28	58
5	107	497	1280	1200	923	290	361	392	176	95	29	62
6	123	414	2080	1600	892	260	374	354	162	84	33	66
7	281	425	2250	2000	1040	278	338	322	149	80	30	92
8	226	367	1200	1700	1110	295	307	298	143	75	26	92
9	179	325	1050	1400	979	290	287	276	149	80	23	180
10	151	293	1300	1250	811	268	279	325	226	72	22	270
11	132	268	3000	1150	692	273	268	410	243	67	22	360
12	119	260	3100	1050	620	277	247	432	182	63	32	350
13	109	410	8300	1000	580	309	229	444	224	59	72	215
14	100	743	6000	950	540	318	257	1090	264	54	48	190
15	91	1580	5800	900	540	300	242	1740	347	55	69	170
16	84	1030	4000	850	520	280	273	1320	278	89	70	150
17	79	700	3000	1050	500	265	313	962	235	79	70	160
18	73	559	2200	1200	475	255	392	756	204	61	69	192
19	69	451	1750	1300	445	245	514	618	186	54	68	178
20	65	382	1400	1200	420	240	557	519	166	49	94	158
21	62	339	1150	1100	395	235	621	456	154	45	82	145
22	58	1050	950	1200	380	260	1040	404	147	41	81	137
23	87	1430	860	1200	365	328	964	376	144	42	86	137
24	121	2160	1300	1050	360	308	783	349	140	39	112	120
25	331	6650	1700	900	370	279	788	347	133	35	90	110
26	347	3300	1400	800	450	255	1620	315	127	35	88	103
27	260	1880	1100	700	440	236	1290	373	116	39	94	98
28	212	1350	900	640	410	220	1010	416	105	37	75	93
29	270	1420	850	620	---	209	808	353	101	38	67	87
30	579	1080	840	600	---	203	685	311	101	38	60	84
31	670	---	800	620	---	195	---	282	---	33	58	---
TOTAL	5599	32505	67176	32190	18667	8556	15869	16200	5493	1949	1775	4213
MEAN	181	1084	2167	1038	667	276	529	523	183	62.9	57.3	140
MAX	670	6650	8300	2000	1300	380	1620	1740	347	107	112	360
MIN	58	260	800	600	360	195	184	276	101	33	22	54
CFSM	1.66	9.95	19.9	9.52	6.12	2.53	4.85	4.80	1.68	.58	.53	1.28
IN.	1.91	11.09	22.93	10.99	6.37	2.92	5.42	5.53	1.87	.67	.61	1.44
AC-FT	11110	64470	133200	63850	37030	16970	31480	32130	10900	3870	3520	8360

CAL YR 1977 TOTAL 180703 MEAN 495 MAX 8300 MIN 15 CFSM 4.54 IN 61.67 AC-FT 358400
WTR YR 1978 TOTAL 210192 MEAN 576 MAX 8300 MIN 22 CFSM 5.28 IN 71.73 AC-FT 416900

NOTE.--No gage-height record Dec. 7 to Feb. 3, Aug. 16 to Sept. 17.

14189000 SANTIAM RIVER AT JEFFERSON, OR

LOCATION.--Lat 44°42'55", long 123°00'40", in SE¼ sec.11, T.10 S., R.3 W., Marion County, Hydrologic Unit 17090005, on right bank 350 ft (107 m) upstream from Southern Pacific railroad bridge at Jefferson, 2.1 mi (3.4 km) downstream from confluence of North and South Santiam Rivers, and at mile 9.62 (15.5 km).

DRAINAGE AREA.--1,790 mi² (4,640 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1905 to June 1906 (gage heights and discharge measurements only), October 1907 to September 1916, October 1939 to current year. Gage-height records collected at same site since 1907 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 904: Drainage area. WSP 1094: 1908, 1910, 1912, 1943. WSP 1248: 1911, 1915-16(M). WSP 1935: 1909.

GAGE.--Water-stage recorder. Datum of gage is 199.63 ft (60.847 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 22, 1940, nonrecording gages at sites within 350 ft (107 m) downstream at datum 3.00 ft (0.914 m) higher.

REMARKS.--Water-discharge records excellent. Flow regulated since 1953 by Detroit Lake (see station 14180500), since 1966 by Green Peter Lake (see station 14186100) and by Foster Lake (see station 14186600). Salem Canal diverts from North Santiam River at Stayton for irrigation and power; most of this water reaches Willamette River by way of Mill Creek at Salem. Stayton Canal diverts from North Santiam River at Stayton for irrigation of lands near West Stayton; some return flow reaches North Santiam River above station. Albany power canal diverts from South Santiam River at Lebanon; return flow reaches Willamette River at Albany.

AVERAGE DISCHARGE.--48 years (water years 1908-16, 1940-78), 7,848 ft³/s (222.3 m³/s), 5,686,000 acre-ft/yr (7.01 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 197,000 ft³/s (5,580 m³/s) Dec. 22, 1964, gage height, 24.22 ft (7.382 m); minimum observed, 260 ft³/s (7.36 m³/s) Aug. 15-22, Aug. 24 to Sept. 2, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood stage of 25.0 ft (7.62 m) was reached in December 1861, and 23.4 ft (7.13 m) in February 1890 (information from Corps of Engineers). On Nov. 21, 1921, the stage reached 19.5 ft (5.94 m) at gage on railroad bridge 350 ft (107 m) downstream, corresponding gage height at present site and datum, 24.4 ft (7.44 m), from curve of relation, discharge, 202,000 ft³/s (5,720 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 56,600 ft³/s (1,603 m³/s) Dec. 14, gage height, 16.23 ft (4.947 m); minimum, 1,000 ft³/s (28.3 m³/s) Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6400	9510	27500	14500	6660	4200	2620	5920	3130	1770	1090	2110
2	6080	13000	30100	14100	10200	3900	3030	5000	2820	1750	1070	2230
3	5280	13100	32500	15200	13900	3800	3430	4520	2700	1800	1120	2010
4	4810	11000	34000	14900	12900	3600	3290	4180	2580	1770	1150	2090
5	4700	10400	32400	16700	10800	3500	3530	4190	2430	1720	1120	2390
6	5330	10200	31600	31400	10700	3600	3720	3680	2270	1570	1100	2870
7	6430	8840	34300	24000	11000	3500	3470	3670	2170	1510	1110	3160
8	6810	8470	32100	20700	12400	3760	3250	3480	2120	1430	1060	3240
9	6340	8160	29600	19200	11600	3840	3090	3380	2120	1440	1030	3450
10	6080	7940	29600	18000	10600	3790	3020	3550	2440	1380	1050	5090
11	6130	7670	33400	16800	9110	3690	3000	3650	2970	1340	1160	7050
12	5960	7620	32400	17100	7900	4050	2650	4500	2780	1320	1160	7660
13	5920	8140	42600	16500	7540	3830	2590	4380	2750	1340	1240	6930
14	5720	9430	48200	17100	6980	3940	2690	6450	2960	1250	1300	6580
15	5440	19100	41800	16100	5600	3500	2690	10300	3470	1250	1320	6150
16	4190	18700	38200	16100	5530	3380	2890	9210	3400	1400	1650	5490
17	3770	14500	41700	15900	5250	3320	2940	7330	3250	1560	1960	4860
18	4390	13000	39900	14100	5090	3300	3320	5950	3140	1430	1740	5460
19	5280	12100	36700	14300	5000	3300	3530	5140	2930	1320	1510	6220
20	5120	11200	34200	14000	4900	3200	3990	4560	2810	1250	1560	6320
21	4270	10900	34900	14300	4860	3040	4140	4210	2490	1210	2000	6040
22	3960	12300	33500	15500	4800	3000	5770	3780	2320	1210	2040	5510
23	3400	18500	28100	14400	4460	3050	6770	3760	2250	1230	2190	4920
24	4010	23000	31300	13400	4480	3650	5530	3640	2230	1210	2150	4460
25	4690	44900	34300	12900	4420	3460	5870	3710	2180	1160	2810	4680
26	5940	43800	31100	12100	4460	3320	10900	3500	2160	1330	2660	4840
27	5940	25700	26500	9900	6000	3220	12600	3650	2060	1460	2390	4540
28	5530	28500	15600	8470	4500	3080	9580	4400	1970	1200	2270	4230
29	5050	29900	15100	7660	---	2990	7900	4180	1870	1180	2240	4160
30	6320	30000	14500	7400	---	2930	6740	3710	1840	1170	2140	3960
31	8580	---	15100	6820	---	2870	---	3400	---	1130	2090	---
TOTAL	168270	489580	982800	475550	211840	107690	138940	145180	76610	43090	50480	138700
MEAN	5428	16320	31700	15340	7566	3474	4631	4683	2554	1390	1628	4623
MAX	8580	44900	48200	31400	13900	4200	12600	10300	3470	1800	2810	7660
MIN	3770	7620	14500	6820	4420	2870	2590	3380	1840	1130	1030	2010
AC-FT	333800	971100	1949000	943300	420200	213600	275600	288000	152000	85470	100100	275100

CAL YR 1977 TOTAL 2597770 MEAN 7117 MAX 48200 MIN 1360 AC-FT 5153000
WTR YR 1978 TOTAL 3028730 MEAN 8298 MAX 48200 MIN 1030 AC-FT 6007000

14189000 SANTIAM RIVER AT JEFFERSON, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 23.5°C Aug. 8, 1971, Aug. 1, 1973; minimum, 1.0°C Jan. 26, 1969.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 19.5°C June 5, Aug. 28, 29; minimum recorded, 5.0°C Jan. 1-3.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.5	12.5	11.5	10.5	8.5	8.0	5.5	5.0			---	---
2	13.5	12.5	11.0	10.0	9.0	8.5	5.0	5.0			---	---
3	13.5	12.0	10.0	9.5	9.0	9.0	5.5	5.0			---	---
4	13.5	11.5	10.0	9.0	9.0	8.0	6.0	5.5			---	---
5	14.0	12.5	11.0	9.5	8.0	7.5	6.5	6.0			---	---
6	13.5	12.5	11.0	10.0	8.0	7.5	6.5	6.0			---	---
7	14.0	13.0	11.0	10.0	8.0	7.0	6.0	6.0			---	---
8	13.5	12.0	10.0	8.5	7.5	7.0	6.5	5.5			---	---
9	14.0	12.5	10.5	9.0	7.0	7.0	6.5	6.0			---	---
10	13.5	12.0	10.5	10.0	7.5	7.0	7.0	6.0			---	---
11	14.0	12.0	10.5	10.0	8.5	7.5	6.5	6.0			---	---
12	14.0	12.5	10.5	10.0	6.0	8.0	6.5	6.0			---	---
13	14.5	13.5	11.0	10.0	9.0	8.0	6.5	6.0			---	---
14	14.0	12.5	10.5	10.0	9.5	9.0	6.5	6.0			---	---
15	14.0	13.0	10.0	9.5	9.5	8.0	7.0	6.5			---	---
16	14.0	13.0	9.5	9.0	8.0	7.5	---	6.5			---	---
17	13.5	12.5	9.0	8.5	7.5	7.5	---	---			---	---
18	13.0	12.0	8.5	7.5	7.5	7.0	---	---			---	---
19	14.0	12.5	7.5	7.0	7.0	6.5	---	---			---	---
20	13.5	12.0	7.0	6.5	6.5	6.0	---	---			---	---
21	13.5	12.0	7.5	6.5	7.0	6.0	---	---			---	---
22	13.0	12.0	7.0	6.0	7.0	6.0	---	---			---	---
23	14.0	12.5	7.5	6.5	7.0	6.0	---	---			---	---
24	13.5	13.0	8.5	7.5	7.0	6.5	---	---			---	---
25	13.0	13.0	9.0	8.0	7.0	6.5	---	---			---	---
26	13.0	12.0	9.0	8.5	6.5	6.0	---	---			---	---
27	12.0	11.0	9.0	8.5	6.5	5.5	---	---			10.0	9.0
28	11.5	11.0	8.5	8.0	6.0	5.5	---	---			9.5	9.0
29	12.0	11.5	8.5	8.0	6.5	5.5	---	---			9.5	9.0
30	11.5	11.0	8.5	8.0	6.5	5.5	---	---			9.5	9.0
31	11.0	10.5	---	---	6.5	5.5	---	---			10.0	8.0
MONTH	14.5	10.5	11.5	6.0	9.5	5.5	7.0	5.0			10.0	8.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.5	8.0	10.5	9.5	16.5	14.0	17.0	16.5	---	---	18.0	15.0
2	9.5	7.5	10.5	9.5	17.5	15.0	17.0	16.0	---	---	18.5	16.5
3	10.0	8.0	10.5	9.5	18.0	15.5	---	---	---	---	17.0	15.5
4	10.5	8.5	10.5	9.0	18.5	16.5	---	---	---	---	15.5	14.0
5	10.0	8.5	10.0	8.5	19.5	17.0	---	---	---	---	14.5	13.5
6	10.0	7.5	11.0	9.0	19.0	17.5	---	---	---	---	15.0	13.5
7	10.5	8.5	11.5	10.0	18.5	17.0	---	---	---	---	14.5	13.5
8	11.0	9.0	12.0	11.0	18.5	17.0	---	---	---	---	14.0	13.5
9	11.5	8.5	12.0	11.0	18.0	16.5	---	---	---	---	14.5	13.5
10	11.5	9.5	11.0	10.5	16.5	14.5	---	---	---	---	14.5	13.0
11	12.5	10.0	12.0	10.0	16.0	13.5	---	---	---	---	14.0	13.0
12	12.5	10.0	11.5	10.5	16.0	15.0	---	---	---	---	14.5	12.5
13	11.5	10.5	11.0	11.0	15.5	14.5	---	---	---	---	14.0	13.0
14	11.0	10.0	11.0	10.5	14.5	13.5	---	---	---	---	14.5	12.5
15	10.5	10.0	11.0	10.0	14.0	13.0	---	---	---	---	14.5	13.0
16	10.5	9.0	11.5	10.0	14.5	13.5	---	---	---	---	14.0	12.0
17	10.5	10.0	11.5	10.5	16.0	13.5	---	---	---	---	13.5	12.5
18	11.5	9.5	11.5	10.0	15.5	14.5	---	---	---	---	13.0	12.0
19	11.5	11.0	12.5	11.0	15.5	13.5	---	---	---	---	14.0	11.5
20	11.0	10.0	15.0	12.0	17.0	15.0	---	---	---	---	14.0	12.5
21	10.5	9.5	16.0	13.0	16.5	15.5	---	---	---	---	14.5	13.0
22	10.0	9.0	13.0	11.5	15.5	14.5	---	---	---	---	15.0	12.5
23	10.0	8.5	13.0	11.5	15.0	14.5	---	---	16.5	15.0	15.0	14.0
24	11.0	9.5	13.0	12.0	15.5	14.5	---	---	16.5	15.5	15.5	14.5
25	10.0	9.5	12.5	11.5	15.0	14.5	---	---	16.0	14.5	15.0	14.0
26	9.5	9.0	12.5	12.0	16.5	14.5	---	---	17.5	14.0	15.0	13.0
27	9.0	8.5	12.0	11.5	18.0	16.0	---	---	18.5	15.5	15.0	13.5
28	10.0	9.0	12.5	11.5	19.0	17.0	---	---	19.5	16.0	14.5	13.5
29	10.5	9.0	13.5	11.5	19.0	17.5	---	---	19.5	16.5	14.5	12.5
30	10.5	10.0	14.5	12.5	17.5	16.0	---	---	18.5	17.0	14.5	12.5
31	---	---	15.5	13.0	---	---	---	---	17.5	15.5	---	---
MONTH	12.5	7.5	16.0	8.5	19.5	13.0	17.0	16.0	19.5	14.0	18.5	11.5

14189500 LUCKIAMUTE RIVER NEAR HOSKINS, OR

LOCATION.—Lat 44°43'10", long 123°30'10", in NE¼ sec.11, T.10 S., R.7 W., Benton County, Hydrologic Unit 17090003, on right bank 0.2 mi (0.3 km) downstream from Benton County line, 3.5 mi (5.6 km) northwest of Hoskins, and at mile 43.2 (69.5 km).

DRAINAGE AREA.—34.3 mi^2 (88.8 km^2).

PERIOD OF RECORD.—May 1934 to September 1978 (discontinued).

REVISED RECORDS.—WSP 834: 1936(M). WSP 1638: 1943(P), 1946(P). WSP 1738: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 378.7 ft (115.43 m) National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.—Records good. Logponds upstream cause diurnal fluctuation at times. Minor diversion above station by pumping for irrigation.

AVERAGE DISCHARGE.—44 years, 209 ft^3/s (5.919 m^3/s), 82.75 in/yr (2,102 mm/yr), 151,400 acre-ft/yr (187 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,560 ft^3/s (157 m^3/s) Dec. 14, 1946, Feb. 17, 1949; maximum gage height, 13.22 ft (4.029 m) Dec. 14, 1946; minimum discharge, 4.0 ft^3/s (0.11 m^3/s) Sept. 5-8, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 6, 1933, reached a stage of about 13.8 ft (4.21 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.—Peak discharges above base of 2,000 ft^3/s (56.6 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	0230	3,480	98.6	9.00	2.743	Dec. 13	1400	*4,340	123	*10.23	3.118
Dec. 2	1700	3,250	92.0	8.70	2.652						

Minimum, 11 ft^3/s (0.31 m^3/s) Aug. 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	488	503	238	224	144	74	108	80	41	15	18
2	34	614	1840	224	347	135	108	99	74	39	15	18
3	30	372	1520	314	338	129	106	92	69	38	15	18
4	29	271	853	405	297	125	108	87	66	37	15	24
5	29	266	594	630	263	115	221	80	61	35	14	28
6	30	235	737	741	254	108	213	75	56	32	13	25
7	54	240	663	548	329	115	177	69	55	31	13	21
8	45	205	521	510	385	113	150	65	52	30	13	25
9	38	182	428	477	385	102	131	64	69	29	12	69
10	35	157	432	412	332	97	115	62	82	29	11	97
11	32	141	1050	363	297	95	102	95	88	29	12	75
12	30	135	1070	344	268	92	93	82	68	29	15	55
13	29	179	3340	335	232	99	90	219	69	27	18	51
14	29	442	2110	317	224	90	92	456	87	26	15	48
15	28	696	2110	294	221	87	93	477	85	26	17	41
16	27	536	1530	299	200	83	93	385	74	30	19	36
17	27	376	1020	376	192	80	108	311	68	27	18	36
18	26	302	779	412	182	77	208	254	64	25	15	42
19	26	243	614	412	172	72	195	213	61	24	15	34
20	25	205	503	398	162	69	182	182	56	22	35	29
21	25	177	415	460	150	68	219	157	54	21	29	29
22	24	197	353	467	139	66	418	144	52	20	23	31
23	37	470	317	398	133	78	382	131	50	19	22	35
24	42	1270	329	335	131	108	299	121	47	19	38	29
25	54	2930	326	291	182	115	243	113	47	18	32	27
26	45	1540	294	252	174	99	203	121	46	18	26	26
27	39	866	266	219	164	90	169	125	42	18	21	25
28	50	586	243	197	155	85	148	113	40	18	18	24
29	135	651	254	172	---	80	131	100	41	18	17	22
30	392	510	280	157	---	75	119	92	40	17	16	22
31	425	---	257	159	---	71	---	87	---	16	17	---
TOTAL	1908	15482	25551	11156	6532	2962	4990	4779	1843	808	574	1060
MEAN	61.5	516	824	360	233	95.5	166	154	61.4	26.1	18.5	35.3
MAX	425	2930	3340	741	385	144	418	477	88	41	38	97
MIN	24	135	243	157	131	66	74	62	40	16	11	18
CFSM	1.79	15.0	24.0	10.5	6.79	2.78	4.84	4.49	1.79	.76	.54	1.03
IN.	2.07	16.79	27.71	12.10	7.08	3.21	5.41	5.18	2.00	.88	.62	1.15
AC-FT	3780	30710	50680	22130	12960	5880	9900	9480	3660	1600	1140	2100

CAL YR 1977 TOTAL 69265.2 MEAN 190 MAX 3340 MIN 9.6 CFSM 5.54 IN 75.12 AC-FT 137400
WTR YR 1978 TOTAL 77645.0 MEAN 213 MAX 3340 MIN 11 CFSM 6.21 IN 84.21 AC-FT 154000

14190500 LUCKIAMUTE RIVER NEAR SUVER, OR

LOCATION.--Lat 44°47'00", long 123°14'00", in SW¼SW¼ sec.18, T.9 S., R.4 W., Polk County, Hydrologic Unit 17090003, on right bank 10 ft (3 m) upstream from highway bridge at Helmick State Park, 3.0 mi (4.8 km) northwest of Suver, 4.7 mi (7.6 km) downstream from Little Luckiamute River, and at mile 13.5 (21.7 km).

DRAINAGE AREA.--240 mi^2 (622 km^2).

PERIOD OF RECORD.--August 1905 to October 1911, July 1940 to current year.

REVISED RECORDS.--WSP 1044: Drainage area. WSP 1094: 1945-46. WSP 1248: 1905-11.

GAGE.--Water-stage recorder. Datum of gage is 171.92 ft (52.401 m) National Geodetic Vertical Datum of 1929. Aug. 18, 1905, to Oct. 31, 1911, nonrecording gage at present site at different datum, Aug. 20 to Oct. 15, 1940, nonrecording gage at present site and datum.

REMARKS.--Records good. Some diurnal fluctuation during periods of low flow caused by millpond above station. A few small diversions for irrigation above station.

AVERAGE DISCHARGE.--44 years, 923 ft^3/s (26.14 m^3/s), 52.23 in/yr (1,327 mm/yr), 668,700 acre-ft/yr (825 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft^3/s (932 m^3/s) Dec. 22, 1964, gage height, 34.52 ft (10.522 m); minimum, 0.65 ft^3/s (0.018 m^3/s) Aug. 13, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,600 ft^3/s (187 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 26	0400	11,900	337	29.36	8.949	Dec. 14	0230	*19,200	544	*31.60	9.632
Dec. 3	1400	7,700	218	27.37	8.342						

Minimum, 26 ft^3/s (0.74 m^3/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	920	1640	1060	971	611	331	541	314	113	38	54
2	81	1260	2350	983	1620	578	379	496	291	114	37	55
3	74	1060	6590	1160	1800	548	454	460	275	123	37	56
4	68	673	5310	2210	1540	537	430	433	259	108	36	64
5	64	567	3180	2280	1340	522	580	413	245	115	36	81
6	62	579	2470	3870	1320	481	798	387	225	97	38	88
7	69	471	2640	3260	1500	475	685	362	211	94	41	81
8	111	451	2110	2790	1900	566	598	341	206	87	33	74
9	95	391	1720	2810	1800	518	540	326	203	84	30	114
10	81	348	1620	2330	1600	478	494	330	247	95	28	316
11	74	291	2710	1890	1390	457	452	362	277	79	28	322
12	69	261	4510	1810	1250	443	424	385	260	74	28	232
13	66	266	8340	1750	1150	438	403	428	228	72	35	184
14	63	443	15500	1920	1020	439	406	1210	240	68	48	181
15	61	1210	11400	1720	1050	408	421	1500	269	63	40	152
16	59	1340	10500	1680	953	394	430	1360	252	84	45	130
17	57	976	7010	1960	915	379	421	1070	227	99	48	119
18	57	765	4980	2130	860	365	607	886	208	72	50	124
19	56	602	3550	2330	821	353	720	756	198	65	45	122
20	55	521	2540	2010	777	337	680	658	182	60	48	109
21	54	471	2000	1950	732	326	682	583	169	58	88	107
22	54	462	1690	2200	688	318	1140	537	160	54	79	97
23	54	741	1480	1920	650	329	1590	505	155	58	67	112
24	69	2410	1390	1640	623	425	1220	481	151	57	76	108
25	97	6220	1410	1420	668	517	1000	462	149	45	111	99
26	117	10200	1290	1280	770	469	894	440	155	43	97	94
27	101	5830	1160	1130	699	425	774	466	137	40	79	90
28	90	3320	1050	1030	649	39[illegible]	691	443	125	42	68	87
29	119	2310	1080	940	---	379	622	403	117	42	60	82
30	457	2000	1250	856	---	361	572	369	112	43	55	79
31	768	---	1170	823	---	345	---	342	---	48	53	---
TOTAL	3389	47359	115640	57142	31056	13619	19438	17735	6247	2296	1602	3613
MEAN	109	1579	3730	1843	1109	439	648	572	208	74.1	51.7	120
MAX	768	10200	15500	3870	1900	611	1590	1500	314	123	111	322
MIN	54	261	1050	823	623	318	331	326	112	40	28	54
AC-FT	6720	93940	229400	113300	61600	27010	38560	35180	12390	4550	3180	7170

CAL YR 1977 TOTAL 243245.4 MEAN 666 MAX 15500 MIN 9.2 AC-FT 482500
WTR YR 1978 TOTAL 319136.0 MEAN 874 MAX 15500 MIN 28 AC-FT 633000

14190700 RICKREALL CREEK NEAR DALLAS, OR

LOCATION.--Lat 44°54'55", long 123°23'02", in SW¼SE¼ sec.35, T.7 S., R.6 W., Polk County, Hydrologic Unit 17090007, on left bank 1.8 mi (2.9 km) downstream from Canyon Creek, 3.5 mi (5.6 km) west of Dallas, 5.1 mi (8.2 km) downstream from Aaron Mercer Reservoir, and at mile 19.1 (30.7 km).

DRAINAGE AREA.--27.4 mi^2 (71.0 km^2).

PERIOD OF RECORD.--August 1957 to September 1978 (discontinued).

REVISED RECORDS.--WSP 1718: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 460 ft (140 m), from topographic map.

REMARKS.--Records good October, July to September and fair November to June. Low flow regulated since June 1960 by Aaron Mercer Reservoir, usable capacity, 2,010 acre-ft (2.48 hm^3). Diversion for city of Dallas municipal supply from four tributaries and Rickreall Creek above station.

COOPERATION.--Records of diversion, monthend elevations of reservoir, and reservoir capacity curve furnished by city of Dallas.

AVERAGE DISCHARGE.--21 years (water years 1958-78), 148 ft^3/s (4.191 m^3/s), 73.35 in/yr (1,863 mm/yr), 107,200 acre-ft/yr (132 hm^3/yr), adjusted for diversion and storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,160 ft^3/s (203 m^3/s) Dec. 22, 1964, gage height, 8.78 ft (2.676 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft^3/s (36.8 m^3/s) and maximum daily (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	-	unknown		unknown		Dec. 13	-	*3,700	105	unknown	
Dec. 3	-	unknown		unknown							

Minimum, 2.1 ft^3/s (0.059 m^3/s) Sept. 6, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	258	205	181	185	109	68	76	45	15	5.6	6.7
2	15	401	560	169	345	103	74	70	42	16	5.9	6.9
3	14	193	660	391	360	95	78	65	39	15	5.8	8.3
4	12	132	500	672	300	92	79	62	37	14	6.2	7.9
5	12	131	280	722	235	83	145	58	36	12	6.7	8.1
6	13	121	380	696	230	76	152	56	33	9.7	7.0	6.7
7	18	116	350	488	360	97	135	54	30	9.7	5.7	9.0
8	17	96	300	553	430	135	115	52	30	11	3.7	9.5
9	14	82	220	546	380	115	102	50	33	8.7	3.4	19
10	12	71	220	426	310	100	92	49	36	8.7	4.2	24
11	10	62	840	348	240	90	83	62	36	9.6	6.2	34
12	9.6	63	930	362	210	86	78	57	34	7.2	6.2	34
13	9.1	120	3700	392	180	88	75	120	32	5.7	7.8	30
14	10	250	2100	415	165	84	71	380	35	5.2	5.9	25
15	15	370	2050	355	165	78	78	370	34	8.4	8.1	19
16	17	290	1350	360	155	74	74	290	31	10	7.2	15
17	17	180	802	400	145	70	76	200	29	8.9	7.3	14
18	18	145	566	430	140	66	150	150	26	7.5	7.1	14
19	17	115	422	450	130	62	162	130	24	6.6	7.0	9.0
20	16	97	334	390	125	60	152	110	22	5.9	10	9.3
21	17	80	274	420	118	57	160	96	21	4.9	8.3	8.6
22	16	82	230	430	110	56	310	84	21	4.3	8.5	9.2
23	18	180	210	370	98	68	300	85	21	6.0	9.0	12
24	18	500	213	310	98	86	200	78	21	4.3	12	9.2
25	18	2400	205	250	125	113	150	70	21	5.0	9.2	7.9
26	17	1100	185	210	145	105	132	68	19	4.7	9.5	6.1
27	17	550	165	180	135	92	113	67	17	6.2	8.7	6.0
28	19	350	155	155	120	86	102	62	13	6.2	7.9	5.8
29	24	290	177	140	---	76	92	58	14	7.2	7.0	5.2
30	219	250	216	128	---	70	84	53	15	5.8	5.9	9.1
31	181	---	207	135	---	69	---	48	---	6.4	6.8	---
TOTAL	846.7	9075	19006	11474	5739	2641	3682	3230	847	255.8	219.8	388.5
MEAN	27.3	303	613	370	205	85.2	123	104	28.2	8.25	7.09	13.0
MAX	219	2400	3700	722	430	135	310	380	45	16	12	34
MIN	9.1	62	155	128	98	56	68	48	13	4.3	3.4	5.2
AC-FT	1680	18000	37700	22760	11380	5240	7300	6410	1680	507	436	771
MEAN†	31.2	305	616	373	207	87.6	125	107	31.8	11.5	8.55	20.3
CFSM†	1.14	11.1	22.5	13.6	7.55	3.20	4.56	3.91	1.16	.42	.31	.74
IN.†	1.31	12.42	25.90	15.68	7.88	3.69	5.10	4.49	1.29	.48	.36	.83
AC-FT†	1,920	18,160	37,860	22,920	11,520	5,390	7,450	6,560	1,890	707	525	1,210

CAL YR 1977 TOTAL 42141.1 MEAN 115 MAX 3700 MIN 2.4 AC-FT 83590
WTR YR 1978 TOTAL 57404.8 MEAN 157 MAX 3700 MIN 3.4 AC-FT 113900

CAL YR 1977 TOTAL 42,141.1 MEAN 115 MAX 3,700 MIN 2.4 AC-FT 83,590 MEAN† 119 CFSM† 4.34 IN.† 59.08 AC-FT† 86,350
WTR YR 1978 TOTAL 57,404.8 MEAN 157 MAX 3,700 MIN 3.4 AC-FT 113,900 MEAN† 160 CFSM† 5.84 IN.† 79.43 AC-FT† 116,100

† Adjusted for diversion and change in contents of Aaron Mercer Reservoir.

NOTE.--No gage-height record Nov. 13 to Dec. 15, Jan. 14 to Feb. 28, Mar. 8 to Apr. 30, May 5 to June 12.

14191000 WILLAMETTE RIVER AT SALEM, OR

LOCATION.--Lat 44°56'40", long 123°02'30", in SE¼SW¼ sec.22, T.7 S., R.3 W., Marion County, Hydrologic Unit 17090007, on right bank 300 ft (91 m) upstream from Center Street Bridge in Salem and at mile 84.16 (135.41 km).

DRAINAGE AREA.--7,280 mi^2 (18,900 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1909 to December 1916, January 1923 to current year. Monthly discharge only January 1923 to September 1927, published in WSP 1318. Gage-height records collected at about the same site since 1892 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1318: 1915(M).

GAGE.--Water-stage recorder. Datum of gage is 106.14 ft (32.351 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1909, to Dec. 31, 1916, nonrecording gage at site 0.5 mi (0.8 km) upstream at datum 8.00 ft (2.438 m) higher. Jan. 1, 1923, to Nov. 26, 1934, nonrecording gage at Center Street Bridge at datum 8.00 ft (2.438 m) higher. Nov. 27, 1934, to Sept. 30, 1962, water-stage recorder at present site at datum 8.00 ft (2.438 m) higher.

REMARKS.--Water-discharge records excellent. Flow regulated by 12 reservoirs above station (see elsewhere in this report). Many small diversions for irrigation above station; part of flow of Salem Canal, which diverts water from North Santiam River, returns to Willamette River below station, through Mill Creek at Salem (see station 14192000).

AVERAGE DISCHARGE.--62 years, 23,640 ft^3/s (669.5 m^3/s), 44.10 in/yr (1,120 mm/yr), 17,130,000 acre-ft/yr (21.1 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 348,000 ft^3/s (9,860 m^3/s) Jan. 8, 1923, gage height, 38.3 ft (11.67 m), present datum; minimum, 2,470 ft^3/s (70.0 m^3/s) Aug. 27, 1940, gage height, 3.55 ft (1.082 m), present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 500,000 ft^3/s (14,200 m^3/s) Dec. 4, 1861, gage height, about 47 ft (14.3 m) present datum, from rating curve extended above 250,000 ft^3/s (7,080 m^3/s) in 1916. Floods of Jan. 16, 1881, and Feb. 5, 1890, reached stages of 44.3 ft (13.50 m), discharge, 428,000 ft^3/s (12,100 m^3/s), and 45.1 ft (13.75 m), discharge, 448,000 ft^3/s (12,700 m^3/s), respectively, from floodmarks and information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 148,000 ft^3/s (4,190 m^3/s) Dec. 16, gage height, 27.47 ft (8.373 m); minimum, 5,490 ft^3/s (155 m^3/s) July 22, 23, gage height, 4.52 ft (1.378 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15300	20300	76900	51400	21000	14100	9700	17200	10100	6770	5960	7900
2	14300	24500	75300	46300	28400	13300	9810	15600	9520	6550	5860	8350
3	13600	28100	87700	44300	37300	12700	10600	14300	9210	6650	5840	8160
4	11800	26000	88300	53300	47700	12500	11200	13300	8930	6750	5900	8110
5	11500	23900	87200	55200	46400	12400	11400	12800	8600	6720	5880	8350
6	12100	23800	83300	74600	42400	12100	12700	12300	8300	6450	5940	9130
7	14100	21700	84500	84200	39100	12000	12900	11600	8060	6120	6000	9870
8	15500	20300	84300	74500	42300	12300	12100	11100	7870	5900	5940	10600
9	15200	18900	81900	65700	41700	12600	11300	10700	7710	5900	5880	11300
10	14600	18000	77100	58700	38000	12600	10800	10700	7870	5980	5700	12600
11	14700	16400	79700	52000	34000	12300	10400	10700	8570	5840	5920	15700
12	14600	16000	88000	48300	29500	12200	10100	11700	9100	5740	6390	17800
13	13900	16800	97000	47500	27100	12200	9640	12900	8680	5760	6650	18400
14	13800	18300	120000	49200	24600	12200	9640	14900	8740	5800	7000	17700
15	13400	27400	139000	47100	20700	11800	10000	21400	9130	5780	7080	17400
16	12700	39500	146000	46000	20100	11400	10400	23800	9300	5960	7160	16800
17	11300	38300	145000	48600	19100	11200	10800	22000	8880	6350	7550	15700
18	11000	33300	134000	50800	18300	10900	11400	19100	8850	6350	7710	15100
19	12500	30300	118000	52500	17700	10700	12000	16700	8460	6080	7290	15600
20	12600	27800	105000	50800	17100	10500	12700	15000	8240	5780	7180	15300
21	11200	25900	97700	47500	16600	10300	12600	13800	7920	5610	7530	14900
22	10500	25400	91900	49600	16100	10100	14800	12600	7710	5530	7850	15000
23	9700	35900	85400	50800	15700	10100	21200	12100	7610	5530	8030	14800
24	9670	55600	81900	46100	15500	11200	21400	11600	7500	5610	8110	14000
25	9700	78400	86100	41700	15300	11800	18700	11500	7370	5570	8570	13700
26	12600	102000	86800	37700	15200	11300	20300	11300	7470	5590	9210	14100
27	13800	99300	80500	33500	15800	10800	29200	11100	7080	5900	8880	13700
28	13400	85700	66400	30000	15000	10400	27600	11600	7080	5920	8350	13500
29	13600	79100	59300	26700	---	10200	22500	12000	6880	5960	8160	13300
30	14100	79900	56800	24400	---	9990	19200	11200	6800	6040	7950	13300
31	17700	---	54300	22700	---	9840	---	10600	---	6040	7850	---
TOTAL	404470	1156800	2845300	1511700	737700	358030	427290	427200	247540	186530	219320	400170
MEAN	13050	38560	91780	48760	26350	11550	14240	13780	8251	6017	7075	13340
MAX	17700	102000	146000	84200	47700	14100	29200	23800	10100	6770	9210	18400
MIN	9670	16000	54[illegible]0	22700	15000	9840	9640	10600	6800	5530	5700	7900
CFSM	1.79	5.30	12[illegible]6	6.70	3.62	1.59	1.96	1.89	1.13	.83	.97	1.83
IN.	2.07	5.91	14.54	7.72	3.77	1.83	2.18	2.18	1.26	.95	1.12	2.04
AC-FT	802300	2295000	5644000	2998000	1463000	710200	847500	847400	491000	370000	435000	793700

CAL YR 1977 TOTAL 7020160 MEAN 19230 MAX 146000 MIN 4140 CFSM 2.64 IN 35.87 AC-FT 13920000
WTR YR 1978 TOTAL 8922050 MEAN 24440 MAX 146000 MIN 5530 CFSM 3.36 IN 45.59 AC-FT 17700000

14191000 WILLAMETTE RIVER AT SALEM, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1910-12, 1951 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1951 to September 1972, October 1976 to current year.
WATER TEMPERATURES: February 1951 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 141 micromhos Sept. 17, 1966; minimum daily, 30 micromhos Jan. 29, 1965.
WATER TEMPERATURES: Maximum, 25.5°C July 23, 1959; minimum, 0.0°C on several days in 1956.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 122 micromhos July 24; minimum daily, 47 micromhos Nov. 26.
WATER TEMPERATURES: Maximum, 24.5°C July 23; minimum, 5.0°C Jan. 2, 3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE (DEG C)	PH (UNITS)	OXYGEN, DISSOLVED (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	IRON, DISSOLVED (UG/L AS FE)	SILICA, DISSOLVED (MG/L AS SIO2)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
NOV 18...	1030	32900	8.6	8.0	11.8	63	50	15	7.1	1.6	3.5
DEC 27...	1400	77700	6.5	6.6	11.2	50	70	15	4.9	1.5	3.1
FEB 08...	1200	45800	8.4	7.6	11.9	66	50	15	6.7	1.9	3.5
MAR 14...	1135	12200	9.1	7.4	11.9	80	80	15	9.4	2.4	5.5
APR 10...	1000	10600	12.2	7.0	12.6	85	110	15	8.1	2.1	5.3
JUN 28...	1200	7080	19.5	6.8	8.7	96	70	16	8.4	1.9	6.4
AUG 03...	1130	5490	21.5	7.0	8.2	77	50	15	6.6	2.0	5.9
SEP 14...	1330	17700	14.8	7.2	--	64	50	16	5.0	1.6	4.8

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER DAY)
NOV 18...	.6	20	3.4	3.0	.0	.15	.06	24	5	47	4180
DEC 27...	.6	14	4.6	2.9	.1	.62	.06	18	4	44	9230
FEB 08...	.7	20	8.3	2.6	.0	--	.07	25	5	51	6310
MAR 14...	.7	21	5.3	7.6	.0	.54	.13	33	12	61	2010
APR 10...	.7	26	3.3	6.1	.0	.43	.04	29	3	58	1660
JUN 28...	.9	20	4.5	8.5	.1	.41	.05	29	9	60	1150
AUG 03...	.9	25	4.9	4.1	.0	.43	.05	25	0	56	830
SEP 14...	.7	21	3.2	3.7	.0	.03	.03	19	0	48	2290

14191000 WILLAMETTE RIVER AT SALEM, OR—Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	65	52	64	83	84	85	76	91	90	83	80
2	63	62	50	63	85	84	85	80	92	93	84	80
3	65	59	52	64	76	85	83	80	90	99	84	80
4	69	62	54	66	60	83	82	84	92	101	85	86
5	70	65	51	65	61	82	83	86	96	95	85	83
6	70	65	52	60	64	83	86	87	100	93	84	76
7	67	67	51	57	67	82	87	88	102	92	84	72
8	65	68	52	61	67	84	86	89	104	93	83	73
9	65	68	53	64	67	83	86	90	101	96	84	74
10	65	69	54	65	67	80	87	88	101	101	84	74
11	65	70	56	66	69	84	89	89	95	104	85	69
12	65	72	57	65	72	85	89	86	89	104	83	64
13	67	73	58	66	74	81	88	82	89	103	82	64
14	68	72	54	68	75	82	90	84	89	102	81	65
15	69	65	55	69	81	83	97	77	89	100	78	65
16	71	57	55	68	85	81	97	73	88	96	82	67
17	74	60	55	69	87	82	97	74	88	92	79	68
18	76	64	56	68	87	84	100	75	88	88	80	69
19	72	65	54	68	85	86	97	75	90	87	84	68
20	71	65	53	67	85	89	92	78	91	90	87	68
21	74	65	52	67	85	88	95	81	93	90	88	67
22	73	67	51	66	83	87	93	86	95	91	88	68
23	77	67	52	63	85	87	90	87	95	90	67	68
24	79	61	50	65	85	90	84	83	94	91	84	70
25	79	57	49	66	84	87	81	84	94	85	82	71
26	74	49	49	69	85	85	78	88	94	87	77	70
27	71	50	51	70	83	88	70	91	94	85	77	70
28	71	54	57	72	82	88	69	91	95	83	81	71
29	74	51	58	77	---	89	71	88	93	85	81	69
30	75	50	61	79	---	86	74	89	91	84	82	70
31	70	---	63	80	---	85	---	91	---	82	81	---
MEAN	70	63	54	67	77	85	86	84	93	93	83	71

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.0	13.0	11.0	11.0	9.5	9.5	6.5	5.5	7.5	7.5	8.5	7.5
2	13.0	13.0	11.0	10.5	9.5	9.5	5.5	5.0	7.5	7.5	7.5	7.0
3	13.0	12.5	10.5	10.0	10.0	9.5	5.5	5.0	8.0	7.5	7.5	7.0
4	13.0	12.5	10.0	9.0	10.0	9.5	6.0	5.5	8.5	8.0	7.5	7.0
5	13.0	12.5	9.0	9.0	9.5	9.0	6.5	6.0	8.5	8.5	8.5	7.5
6	13.0	13.0	9.5	9.0	9.0	9.0	7.0	6.5	8.5	8.5	9.0	8.5
7	13.0	12.5	10.0	9.5	9.0	8.5	7.0	7.0	8.5	8.5	9.0	9.0
8	13.0	13.0	10.0	9.5	8.5	8.0	7.5	7.0	8.5	8.5	9.5	9.0
9	13.0	12.5	9.5	9.5	8.0	7.5	7.5	7.5	8.0	7.5	10.0	9.5
10	13.0	12.5	9.5	9.5	8.0	7.5	7.5	7.5	7.5	7.0	10.0	9.0
11	13.0	12.5	9.5	9.5	8.5	8.0	7.5	7.5	7.0	6.5	10.0	9.0
12	13.0	12.5	9.5	9.5	8.5	8.5	7.5	7.5	6.5	6.0	9.5	9.0
13	13.5	13.0	10.0	9.5	9.5	8.5	7.5	7.5	6.0	6.0	9.5	8.5
14	13.5	13.5	10.0	10.0	10.5	9.5	7.5	7.5	6.5	6.0	9.5	8.5
15	13.5	13.0	10.0	10.0	10.5	9.5	7.5	7.5	7.0	6.5	9.5	8.5
16	13.5	13.0	10.5	10.0	9.5	8.0	7.5	7.5	7.0	7.0	9.5	8.5
17	13.5	13.0	10.0	9.5	8.0	8.0	8.0	8.0	7.0	7.0	10.5	9.0
18	13.5	12.5	9.5	8.5	8.0	7.5	8.0	8.0	8.0	7.0	11.5	10.0
19	12.5	12.5	8.5	7.5	7.5	7.0	8.0	7.5	9.0	8.0	12.5	11.0
20	12.5	12.0	7.5	7.0	7.0	6.5	8.5	8.0	9.0	8.5	12.5	11.5
21	12.5	12.0	7.0	6.5	6.5	6.5	8.5	8.5	9.0	9.0	12.5	11.5
22	12.5	12.5	6.0	6.0	7.0	6.5	8.5	8.0	9.0	9.0	12.0	11.5
23	12.5	12.5	7.5	6.0	7.0	7.0	8.0	7.0	9.0	9.0	12.0	11.5
24	13.0	13.0	8.0	7.0	7.5	7.0	7.0	6.5	9.5	9.0	11.5	11.0
25	13.0	13.0	9.5	8.0	7.5	7.5	6.5	6.5	9.5	9.5	11.5	10.5
26	13.0	12.5	9.5	9.5	7.5	7.0	7.0	6.5	10.0	9.5	13.0	11.5
27	12.5	11.5	9.5	9.5	7.0	6.5	7.0	7.0	9.5	9.0	13.0	12.0
28	11.5	11.0	9.5	9.5	6.5	6.5	7.5	7.0	9.0	8.5	13.0	12.5
29	11.0	11.0	9.5	9.5	6.5	6.5	7.5	7.5	---	---	13.0	12.0
30	11.0	11.0	9.5	9.5	7.0	6.5	7.5	7.0	---	---	12.5	12.0
31	11.0	11.0	---	---	7.0	6.5	7.5	7.5	---	---	12.5	11.5
MONTH	13.5	11.0	11.0	6.0	10.5	6.5	8.5	5.0	10.0	6.0	13.0	7.0

14191000 WILLAMETTE RIVER AT SALEM, OR—Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.5	11.0	12.5	11.5	18.0	16.0	19.0	18.0	22.0	20.5	18.5	18.0
2	11.0	10.5	13.0	12.0	19.0	17.0	18.0	17.5	22.0	21.0	19.0	18.0
3	11.0	10.0	13.0	12.0	20.5	18.5	17.5	16.5	22.5	21.0	18.5	18.0
4	11.5	10.5	13.0	12.0	21.0	19.5	17.0	16.0	22.5	21.5	17.5	17.0
5	11.0	10.5	12.5	11.5	22.0	20.5	17.5	15.5	22.0	21.0	17.0	16.0
6	11.0	10.5	13.5	11.5	22.5	21.0	19.0	17.0	22.0	21.0	16.5	15.5
7	11.0	10.0	14.5	12.5	21.5	20.5	21.0	18.5	23.0	21.0	16.0	15.0
8	12.0	10.0	15.5	13.5	21.0	19.5	21.0	20.0	24.0	22.0	15.5	15.0
9	12.5	11.0	15.0	14.5	20.5	19.0	20.5	19.5	24.0	23.0	15.0	14.5
10	13.5	12.0	14.5	13.0	19.0	17.5	19.0	18.0	23.5	22.5	15.5	14.5
11	13.5	12.5	13.5	12.5	18.5	17.0	18.5	17.5	22.5	21.5	15.5	14.5
12	13.5	12.5	13.5	12.5	18.0	17.0	19.5	18.0	21.5	20.0	15.0	14.5
13	12.5	12.0	12.5	12.0	17.5	16.5	21.0	19.0	20.0	19.5	14.5	14.5
14	12.0	11.5	12.0	11.0	17.0	16.0	22.5	20.5	20.0	18.5	15.0	14.5
15	11.5	10.5	11.5	11.0	16.5	15.5	22.0	20.5	19.5	18.5	15.5	14.5
16	11.0	10.0	12.0	11.0	17.0	15.5	20.5	19.5	19.5	18.5	15.0	15.0
17	10.5	10.5	12.5	11.5	18.0	16.0	19.5	18.5	19.0	18.0	15.0	14.0
18	11.0	10.5	14.0	12.5	18.0	17.0	19.5	18.5	19.0	18.0	14.5	13.5
19	11.5	11.0	16.0	14.0	18.0	16.5	21.0	19.0	19.0	18.0	14.5	13.5
20	11.5	11.0	17.5	15.5	19.0	17.0	22.0	20.5	18.5	17.5	14.0	13.5
21	11.0	10.5	17.0	15.0	18.5	18.0	23.0	21.5	18.0	17.5	15.0	14.0
22	11.0	10.0	15.0	14.0	18.0	17.0	24.0	22.5	17.0	16.5	15.0	14.5
23	10.0	9.5	14.0	13.0	17.5	17.0	24.5	23.0	17.0	16.5	15.5	14.0
24	11.0	10.0	13.5	12.5	17.5	16.5	24.0	22.5	17.0	16.5	16.5	15.0
25	11.5	11.0	13.5	12.5	17.0	16.5	24.0	22.5	17.0	16.0	16.5	15.5
26	11.5	11.0	13.0	12.5	18.0	16.0	23.5	22.5	17.0	16.0	17.0	16.0
27	11.5	11.0	13.5	12.5	19.5	17.5	22.5	21.0	18.5	16.5	16.5	16.0
28	11.5	11.0	14.0	13.0	21.0	19.0	21.5	20.5	19.5	17.5	16.5	16.0
29	12.5	11.5	14.5	13.0	20.5	19.5	21.5	20.0	20.5	18.5	16.5	15.5
30	13.0	12.0	15.5	13.5	20.0	19.0	22.0	20.5	20.5	19.5	16.0	15.5
31	---	---	16.5	14.5	---	---	22.0	21.0	19.5	18.5	---	---
MONTH	13.5	9.5	17.5	11.0	22.5	15.5	24.5	15.5	24.0	16.0	19.0	13.5

14192000 MILL CREEK AT SALEM, OR

LOCATION.--Lat 44°56'05", long 123°01'00", in SW¼NE¼ sec.26, T.7 S., R.3 W., Marion County, Hydrologic Unit 17090007, on left bank at State Street Bridge in Salem, 220 ft (67 m) downstream from 19th Street power diversion and at mile 2.11 (3.39 km).

DRAINAGE AREA.--110 mi^2 (285 km^2).

PERIOD OF RECORD.--November, December 1934, August to October 1938, May 1939 to September 1978 (discontinued). Prior to October 1940 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1718: 1954(M), 1956(M), 1956(M).

GAGE.--Water-stage recorder. Datum of gage is 166.12 ft (50.633 m) National Geodetic Vertical Datum of 1929. See WSP 1738 for history of changes prior to Oct. 10, 1940.

REMARKS.--Records good except those for December and January, which are fair. Diurnal fluctuation caused by powerplant above station. Salem power canal diverts water into Mill Creek near Stayton. Several diversions from Mill Creek, including Shelton flood bypass 1.2 mi (1.9 km) upstream and 19th Street power diversion 220 ft (67 m) upstream.

AVERAGE DISCHARGE.--39 years (water years 1940-78), 138 ft^3/s (3.908 m^3/s), 99,980 acre-ft/yr (123 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,230 ft^3/s (63.2 m^3/s) Jan. 16, 1974, gage height, 9.85 ft (3.002 m), from floodmark; no flow Oct. 2, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,500 ft^3/s (42.5 m^3/s) Dec. 13; maximum recorded gage height, 4.80 ft (1.463 m) Nov. 25; minimum discharge, 11 ft^3/s (0.31 m^3/s) July 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	132	266	160	160	94	50	130	53	44	54	75
2	61	154	365	155	246	88	72	118	51	74	56	82
3	57	130	442	240	246	84	82	105	51	102	60	82
4	56	107	352	140	215	82	78	100	49	84	59	88
5	67	107	295	400	204	79	96	96	48	46	60	82
6	69	101	306	900	220	74	92	90	79	22	63	69
7	65	95	290	560	253	76	88	85	75	24	59	64
8	58	88	270	520	259	92	82	78	72	25	42	56
9	51	82	265	450	235	84	78	75	85	42	43	82
10	45	77	290	400	209	76	75	75	93	41	39	112
11	42	74	350	330	191	75	67	75	100	27	48	112
12	42	73	450	280	180	72	60	75	84	27	67	81
13	39	123	1500	360	169	75	56	85	82	27	88	71
14	37	123	1350	275	158	71	78	156	88	51	71	78
15	37	156	1450	270	178	65	81	204	82	69	56	74
16	38	139	800	280	171	62	88	167	68	98	78	55
17	38	123	640	380	160	58	100	142	64	93	82	53
18	53	126	450	370	150	55	114	124	69	79	63	51
19	57	116	370	330	140	51	111	112	64	64	60	48
20	54	107	280	280	130	47	116	109	60	55	71	45
21	54	101	265	300	115	45	126	103	51	53	85	45
22	53	126	250	350	105	43	182	95	49	56	68	44
23	60	309	230	300	105	53	165	93	58	69	63	41
24	63	332	230	240	105	76	138	90	64	71	65	35
25	63	709	215	220	110	65	126	85	65	56	72	34
26	62	562	205	190	115	56	213	84	62	59	68	22
27	60	442	195	180	110	51	215	85	50	72	62	19
28	67	356	180	165	100	47	180	85	43	78	59	27
29	86	317	180	150	---	44	156	78	33	75	62	39
30	110	277	205	140	---	43	144	59	36	76	75	38
31	135	---	190	140	---	51	---	58	---	63	78	---
TOTAL	1843	5764	13126	9395	4739	2034	3309	3116	1928	1822	1976	1804
MEAN	59.5	192	423	303	169	65.6	110	101	64.3	58.8	63.7	60.1
MAX	135	709	1500	900	259	94	215	204	100	102	88	112
MIN	37	73	180	140	100	43	50	58	33	22	39	19
AC-FT	3660	11430	26040	18630	9400	4030	6560	6180	3820	3610	3920	3580

CAL YR 1977 TOTAL 44238 MEAN 121 MAX 1500 MIN 12 AC-FT 87750
WTR YR 1978 TOTAL 50856 MEAN 139 MAX 1500 MIN 19 AC-FT 100900

NOTE.--No gage-height record Dec. 7 to Feb. 1.

14192500 SOUTH YAMHILL RIVER NEAR WILLAMINA, OR

LOCATION.—Lat 45°02'50", long 123°30'10", in NE¼SE¼ sec.14, T.6 S., R.7 W., Polk County, Hydrologic Unit 17090008, on left bank 2.3 mi (3.7 km) southwest of Willamina, 2.8 mi (4.5 km) upstream from Willamina Creek, and at mile 45.5 (73.2 km).

DRAINAGE AREA.—133 mi² (344 km²).

PERIOD OF RECORD.—May 1934 to current year.

REVISED RECORDS.—WSP 814: Drainage area. WSP 1318: 1934.

GAGE.—Water-stage recorder. Datum of gage is 235.55 ft (71.796 m) National Geodetic Vertical Datum of 1929.

REMARKS.—Records good. Slight regulation occassionally at low flows by millpond upstream. No diversion above station.

AVERAGE DISCHARGE.—44 years, 629 ft³/s (17.81 m³/s), 64.22 in/yr (1,631 mm/yr), 455,700 acre-ft/yr (562 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 19,600 ft³/s (555 m³/s) Dec. 22, 1964, gage height, 17.07 ft (5.203 m); minimum, 2.6 ft³/s (0.074 m³/s) Oct. 11, 1952.

EXTREMES FOR CURRENT YEAR.—Peak discharges above base of 5,700 ft³/s (161 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	1830	9,350	265	10.80	3.292	Dec. 2	1930	8,840	250	10.45	3.185
Dec. 13	1730	*13,400	379	*13.41	4.087						

Minimum, 17 ft³/s (0.48 m³/s) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	1040	1090	544	728	557	207	379	193	83	28	47
2	87	1720	4480	508	1180	504	292	340	181	85	27	57
3	79	932	4700	776	1080	466	364	306	167	81	26	60
4	72	692	2400	1530	955	453	356	296	153	79	25	101
5	68	728	1610	2350	898	405	809	271	142	74	25	99
6	65	585	1940	2530	1070	367	718	248	130	68	23	90
7	109	557	1710	1830	1850	441	571	229	123	67	21	75
8	103	461	1330	2050	2060	508	478	210	120	62	19	72
9	83	401	1080	1860	1820	413	417	204	130	60	19	367
10	74	352	1380	1480	1440	375	371	199	175	60	18	562
11	68	310	2650	1210	1160	352	333	274	199	60	18	466
12	63	292	2850	1090	996	340	299	248	153	60	22	296
13	60	476	9950	1220	836	360	281	864	148	55	31	244
14	57	1260	8090	1390	792	333	281	1900	184	52	32	216
15	55	1870	7570	1220	853	303	296	1650	204	49	29	167
16	52	1440	5360	1340	734	285	292	1160	169	72	41	140
17	49	996	3030	1320	672	268	401	892	150	65	40	142
18	48	787	2150	1300	618	251	875	723	135	54	32	172
19	47	613	1600	1260	566	238	728	594	132	49	28	135
20	44	499	1260	1170	521	222	662	504	120	47	49	120
21	44	429	1030	1490	478	216	809	437	114	42	90	118
22	44	421	875	1520	441	204	1580	405	111	39	54	125
23	74	765	776	1300	409	225	1300	367	107	36	45	142
24	90	2570	760	1090	409	303	996	333	103	34	109	118
25	169	7780	703	943	864	421	820	310	103	33	158	107
26	148	4930	613	814	809	336	697	299	103	33	111	99
27	118	2490	548	697	697	292	590	317	92	35	77	96
28	123	1630	504	633	623	264	512	292	85	37	63	90
29	401	1640	566	553	---	244	449	254	83	35	54	85
30	1110	1250	713	491	---	229	413	229	83	32	49	81
31	728	---	604	526	---	213	---	210	---	29	45	---
TOTAL	4428	39918	73922	38035	25559	10388	17197	14944	4092	1667	1408	4689
MEAN	143	1331	2385	1227	913	335	573	482	136	53.8	45.4	156
MAX	1110	7780	9950	2530	2060	557	1580	1900	204	85	158	562
MIN	44	292	504	491	409	204	207	199	83	29	18	47
CFSM	1.08	10.0	17.9	9.23	6.87	2.52	4.31	3.62	1.02	.41	.34	1.17
IN.	1.24	11.16	20.68	10.64	7.15	2.91	4.81	4.18	1.14	.47	.39	1.31
AC-FT	8780	79180	146600	75440	50700	20600	34110	29640	8120	3310	2790	9300

CAL YR 1977 TOTAL 190256.2 MEAN 521 MAX 9950 MIN 7.3 CFSM 3.92 IN 53.21 AC-FT 377400
WTR YR 1978 TOTAL 236247.0 MEAN 647 MAX 9950 MIN 18 CFSM 4.87 IN 66.08 AC-FT 468600

14193000 WILLAMINA CREEK NEAR WILLAMINA, OR

LOCATION.--Lat 45°08'35", long 123°29'35", in NE¼NW¼ sec.13, T.5 S., R.7 W., Yamhill County, Hydrologic Unit 17090008, on right bank 4.5 mi (7.2 km) north of Willamina and at mile 6.2 (10.0 km).

DRAINAGE AREA.--64.7 mi^2 (167.6 km^2).

PERIOD OF RECORD.--June 1934 to current year.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 315 ft (96.0 m) National Geodetic Vertical Datum of 1929 (plane-table survey). Prior to Oct. 1, 1939, water-stage recorder at site on left bank at datum 1.00 ft (0.305 m) higher. Oct. 1, 1939, to Aug. 5, 1968, water-stage recorder at site on left bank at present datum.

REMARKS.--Records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--44 years, 263 ft^3/s (7.448 m^3/s), 55.20 in/yr (1,402 mm/yr), 190,500 acre-ft/yr (235 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft^3/s (306 m^3/s) Dec. 22, 1964, gage height, 13.54 ft (4.126 m), from rating curve extended above 3,400 ft^3/s (96.3 m^3/s) on basis of slope-area measurement at gage height 11.65 ft (3.551 m); minimum, 5.4 ft^3/s (0.15 m^3/s) July 15, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 31, 1931, reached a stage of about 12 ft (3.6 m) from information by local resident, discharge, 8,200 ft^3/s (232 m^3/s) from rating curve extended above 3,400 ft^3/s (96.3 m^3/s) on basis of slope-area measurement at gage height 11.65 ft (3.551 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,300 ft^3/s (65.1 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	1430	3,980	113	8.80	2.682	Dec. 13	1300	*5,900	167	*10.46	3.188
Dec. 2	1630	4,790	136	9.56	2.914						

Minimum, 14 ft^3/s (0.40 m^3/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	349	502	232	300	240	121	188	111	47	21	23
2	40	473	2550	223	380	225	171	173	104	48	21	23
3	36	306	2110	298	355	210	178	159	97	47	21	24
4	34	226	1160	427	330	200	168	154	92	46	20	40
5	32	191	784	711	310	190	340	143	87	43	19	38
6	32	157	784	775	400	180	301	132	80	41	19	33
7	51	161	695	639	580	195	254	123	77	40	18	28
8	44	141	597	659	620	210	221	115	76	38	17	33
9	38	128	518	620	580	200	198	113	83	37	16	128
10	35	115	597	540	500	196	180	109	95	38	15	180
11	32	106	883	480	420	185	166	145	87	38	16	115
12	31	100	1190	470	350	176	154	128	77	37	19	73
13	29	154	4580	497	300	183	148	334	79	36	21	69
14	28	456	3460	526	280	171	143	559	88	34	20	62
15	27	632	3520	483	300	161	148	515	87	35	22	51
16	26	487	2540	494	280	152	145	433	76	46	22	45
17	25	372	1530	526	270	145	178	366	70	38	20	54
18	25	312	1070	547	250	138	298	317	66	36	18	57
19	24	254	797	551	240	134	273	273	65	33	19	48
20	24	209	639	511	225	128	251	238	61	32	33	44
21	24	183	536	616	210	123	293	209	60	29	36	44
22	24	176	463	624	200	119	562	198	60	27	26	44
23	36	328	413	562	190	134	518	188	57	26	25	46
24	36	964	382	500	190	171	423	183	56	25	38	42
25	45	3060	354	440	300	207	363	168	56	25	49	38
26	46	1890	323	380	290	171	323	173	56	24	35	36
27	39	1050	295	330	270	154	290	173	54	26	26	36
28	41	699	273	290	255	145	254	159	48	26	23	34
29	82	695	273	250	---	136	223	143	48	25	21	33
30	337	547	283	205	---	130	207	132	48	23	20	32
31	221	---	254	230	---	123	---	121	---	22	20	---
TOTAL	1589	14921	34355	14636	9175	5232	7492	6564	2201	1068	716	1553
MEAN	51.3	497	1108	472	328	169	250	212	73.4	34.5	23.1	51.8
MAX	337	3060	4580	775	620	240	562	559	111	48	49	180
MIN	24	100	254	205	190	119	121	109	48	22	15	23
CFSM	.79	7.68	17.1	7.30	5.07	2.61	3.86	3.28	1.13	.53	.36	.80
IN.	.91	8.58	19.75	8.42	5.28	3.01	4.31	3.77	1.27	.61	.41	.89
AC-FT	3150	29600	68140	29030	18200	10380	14860	13020	4370	2120	1420	3080

CAL YR 1977 TOTAL 78864.3 MEAN 216 MAX 4580 MIN 8.3 CFSM 3.34 IN 45.34 AC-FT 156400
WTR YR 1978 TOTAL 99502.0 MEAN 273 MAX 4580 MIN 15 CFSM 4.22 IN 57.21 AC-FT 197400

NOTE.--No gage-height record Jan. 24 to Mar. 9.

14194000 SOUTH YAMHILL RIVER NEAR WHITESON, OR

LOCATION.--Lat 45°10'08", long 123°12'25", in NE¼NW¼ sec.5, T.5 S., R.4 W., Yamhill County, Hydrologic Unit 17090008, near left bank on downstream side of Whiteson Bridge on State Highway 99W, 1.3 mi (2.1 km) northwest of Whiteson, 1.4 mi (2.3 km) downstream from Salt Creek, and at mile 16.71 (26.89 km).

DRAINAGE AREA.--502 mi^2 (1,300 km^2).

PERIOD OF RECORD.--July 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 82.30 ft (25.085 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 20, 1940, nonrecording gage at present site and datum.

REMARKS.--Records good. Slight regulation during low-water periods by logpond upstream. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--38 years, 1,786 ft^3/s (50.58 m^3/s), 48.31 in/yr (1,227 mm/yr), 1,294,000 acre-ft/yr (1.60 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,200 ft^3/s (1,340 m^3/s) Dec. 23, 1964, gage height, 47.20 ft (14.387 m); minimum, 3.2 ft^3/s (0.091 m^3/s) Aug. 24, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 46.9 ft (14.30 m), from Oregon State Highway Department bridge plans.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 13,000 ft^3/s (368 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 26	1530	18,200	515	40.00	12.192	Dec. 14	0800	*27,800	787	*43.39	13.225
Dec. 3	2100	13,000	368	37.28	11.363						

Minimum, 25 ft^3/s (0.73 m^3/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	197	1370	2880	1760	2090	1350	702	1120	611	200	50	75
2	175	2890	4000	1580	3650	1320	778	1020	568	200	48	80
3	156	2510	10800	1790	4250	1200	971	937	500	190	46	90
4	140	1540	11300	4020	3820	1100	981	876	459	190	44	110
5	123	1410	7240	5120	3240	1000	1500	847	435	180	43	170
6	114	1340	4630	8070	3310	1000	2070	782	399	180	41	160
7	113	1130	4380	7550	4320	1130	1700	729	357	170	40	150
8	193	1030	3700	6070	6350	1620	1500	679	340	170	34	137
9	170	882	3070	6570	6400	1480	1300	636	332	160	30	210
10	144	778	2940	5840	5330	1310	1100	622	394	160	28	937
11	128	689	4410	4640	4150	1190	1000	640	455	150	27	1090
12	117	633	6980	3900	3380	1130	900	786	433	150	29	762
13	110	704	11200	3620	2930	1080	820	817	372	140	38	534
14	105	1310	26800	4680	2470	1110	840	3180	384	140	48	502
15	99	3180	24800	4650	2550	1010	844	4220	461	140	55	370
16	96	3600	25000	4510	2390	955	863	3640	433	150	54	298
17	95	3000	18900	4660	2240	906	861	2680	382	170	61	318
18	92	2400	13300	4600	2070	859	1580	2090	347	150	61	349
19	90	2000	8750	5060	1900	815	1990	1710	318	130	54	282
20	87	1600	5400	4720	1760	764	1880	1440	301	120	60	258
21	95	1300	3820	4400	1610	731	1850	1250	277	110	113	241
22	94	1100	3050	5090	1490	702	2930	1110	271	95	148	256
23	94	1000	2600	4710	1380	711	4020	1040	264	85	101	268
24	132	3690	2360	3940	1330	878	3110	992	256	75	96	241
25	196	7250	2230	3300	1860	1250	2410	937	244	70	213	223
26	279	16100	2020	2850	2210	1180	2040	888	247	54	280	199
27	266	14000	1810	2440	1610	1010	1770	935	238	57	175	188
28	221	8540	1630	2180	1460	910	1550	890	220	60	120	196
29	274	4950	1590	2010	---	842	1360	813	220	63	100	175
30	1420	3700	2020	1770	---	784	1220	725	200	62	90	148
31	1900	---	2000	1660	---	735	---	670	---	57	80	---
TOTAL	7517	95626	225610	127760	81550	32062	46440	39701	10718	4028	2407	9017
MEAN	242	3188	7278	4121	2913	1034	1548	1281	357	130	77.6	301
MAX	1900	16100	26800	8070	6400	1620	4020	4220	611	200	280	1090
MIN	87	633	1590	1580	1330	702	702	622	200	54	27	75
CFSM	.48	6.35	14.5	8.21	5.80	2.06	3.08	2.55	.71	.26	.16	.60
IN.	.56	7.09	16.72	9.47	6.04	2.38	3.44	2.94	.79	.30	.18	.67
AC-FT	14910	189700	447500	253400	161800	63590	92110	78750	21260	7990	4770	17890

CAL YR 1977 TOTAL 485929.4 MEAN 1331 MAX 26800 MIN 9.7 CFSM 2.65 IN 36.01 AC-FT 963800
WTR YR 1978 TOTAL 682436.0 MEAN 1870 MAX 26800 MIN 27 CFSM 3.73 IN 50.57 AC-FT 1354000

14194300 NORTH YAMHILL RIVER NEAR FAIRDALE, OR

LOCATION.--Lat 45°21'55", long 123°22'40", in SW¼ sec.25, T.2 S., R.6 W., Yamhill County, Hydrologic Unit 17090008, on right bank 0.4 mi (0.6 km) downstream from small tributary, 1.3 mi (2.1 km) upstream from Kutch Creek, 2.1 mi (3.4 km) west of Fairdale, 9.5 mi (15.3 km) west of Yamhill and at mile 28.4 (45.7 km).

DRAINAGE AREA.--9.03 mi² (23.39 km²).

PERIOD OF RECORD.--October 1958 to March 1966, October 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 560 ft (171 m), from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--18 years (water years 1959-65, 1968-78), 49.7 ft³/s (1.408 m³/s), 74.74 in/yr (1,898 mm/yr), 36,010 acre-ft/yr (44.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,330 ft³/s (66.0 m³/s) Dec. 22, 1964, gage height, 6.88 ft (2.097 m), from rating curve extended above 1,000 ft³/s (28.3 m³/s); maximum gage height, 9.7 ft (2.96 m) Dec. 23, 1964 (backwater from debris); minimum discharge, 2.3 ft³/s (0.065 m³/s) Sept. 23-26, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (9.91 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	1730	481	13.6	4.56	1.390	Dec. 13	1030	*1,200	34.0	*6.08	1.853
Dec. 2	1330	797	22.6	5.33	1.625						

Minimum, 3.7 ft³/s (0.10 m³/s) Aug. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	95	88	52	88	51	28	30	21	10	5.2	5.4
2	9.3	118	421	51	121	48	33	28	20	10	5.2	5.7
3	8.5	73	289	61	109	45	33	26	19	9.7	4.9	6.3
4	8.1	58	162	82	92	43	33	25	18	9.3	4.9	8.1
5	7.7	53	116	135	83	40	47	24	16	8.9	4.6	7.0
6	8.5	44	128	147	82	38	43	21	15	8.5	4.6	6.0
7	14	42	113	118	130	46	40	20	15	8.1	4.4	5.4
8	11	38	97	123	151	45	38	19	14	7.7	4.2	7.4
9	9.7	33	82	116	137	41	35	19	17	7.7	4.2	42
10	8.5	29	99	101	113	38	33	19	17	7.7	3.9	34
11	8.1	27	147	88	94	38	30	28	17	7.7	4.4	22
12	7.7	27	191	81	81	36	29	25	15	7.4	4.6	16
13	7.4	35	844	92	70	38	28	51	15	7.0	4.9	15
14	7.0	78	467	98	66	36	28	72	17	6.7	4.9	13
15	6.7	99	434	91	62	34	28	68	16	7.0	5.2	11
16	6.3	91	339	109	58	32	27	58	15	8.5	5.2	10
17	6.0	71	213	105	53	31	31	49	14	7.4	4.9	12
18	5.7	59	158	102	52	29	39	43	13	7.0	4.6	11
19	5.7	50	123	102	50	28	40	39	13	6.7	4.6	9.3
20	5.7	42	104	94	48	27	38	35	12	6.3	6.7	8.9
21	5.4	38	88	112	46	26	45	32	12	6.0	6.3	8.9
22	5.4	35	78	115	44	25	70	31	12	6.0	5.7	10
23	8.5	46	72	101	42	29	70	31	12	6.0	7.4	9.7
24	9.3	98	68	87	47	38	61	30	11	5.7	13	8.9
25	12	347	67	77	73	45	53	28	11	5.7	9.3	8.1
26	12	254	65	68	67	40	48	28	11	6.0	7.0	7.7
27	10	144	62	63	61	37	43	28	9.7	6.0	6.3	7.4
28	11	105	60	59	55	34	40	27	9.7	6.0	6.0	7.0
29	25	109	60	54	---	32	36	25	10	5.7	5.4	7.0
30	68	90	58	52	---	30	34	24	10	5.4	5.2	7.0
31	50	---	54	64	---	28	---	23	---	5.2	5.4	---
TOTAL	378.2	2428	5347	2800	2175	1128	1181	1006	427.4	223.0	173.1	337.2
MEAN	12.2	80.9	172	90.3	77.7	36.4	39.4	32.5	14.2	7.19	5.58	11.2
MAX	68	347	844	147	151	51	70	72	21	10	13	42
MIN	5.4	27	54	51	42	25	27	19	9.7	5.2	3.9	5.4
CFSM	1.35	8.96	19.0	10.0	8.61	4.03	4.36	3.60	1.57	.80	.62	1.24
IN.	1.56	10.00	22.03	11.53	8.96	4.65	4.86	4.14	1.76	.92	.71	1.39
AC-FT	750	4820	10610	5550	4310	2240	2340	2000	848	442	343	669

CAL YR 1977 TOTAL 13846.0 MEAN 37.9 MAX 844 MIN 2.6 CFSM 4.20 IN 57.03 AC-FT 27460
WTR YR 1978 TOTAL 17603.9 MEAN 48.2 MAX 844 MIN 3.9 CFSM 5.34 IN 72.51 AC-FT 34920

14195500 HASKINS CREEK RESERVOIR NEAR MCMINNVILLE, OR

LOCATION.—Lat 45°18'40", long 123°21'15", in NW¼ sec.18, T.3 S., R.5 W., Yamhill County, Hydrologic Unit 17090008, on control tower 250 ft (76 m) upstream from dam on Haskins Creek, 11 mi (18 km) northwest of McMinnville, and at mile 5.1 (8.2 km).

DRAINAGE AREA.—6.88 mi^2 (17.82 km^2).

PERIOD OF RECORD.—October 1951 to current year.

REVISED RECORDS.—WSP 1738: Drainage area.

GAGE.—Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of McMinnville).

REMARKS.—Reservoir is formed by earthfill dam equipped with five siphon spillways which act as overflow weirs until priming occurs, approximately 835.5 ft (254.66 m) elevation. Capacity of reservoir is 733 acre-ft (904,000 m^3) between elevations 761.5 ft (232.11 m), invert of outlet tunnel, and 835.0 ft (254.51 m), crest of siphon spillways. Dead storage negligible. Rated capacity of three siphons is 700 ft^3/s (19.8 m^3/s) each and remaining two siphons 350 ft^3/s (9.91 m^3/s) each. Under normal operation, reservoir is filled in the spring (April or May) and drained when fall rains start. There is no planned storage during winter months; however, during periods of heavy runoff, inflow may be greater than capacity of outlet tunnel and there may be some temporary storage. Water is used for municipal supply of city of McMinnville.

COOPERATION.—Elevation and capacity table furnished by city of McMinnville, Water and Light Department.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents observed, 756 acre-ft (932,000 m^3) Sept. 18-30, 1978, elevation, 836.0 ft (254.81 m); no contents most of time during winter months.

EXTREMES FOR CURRENT YEAR.—Maximum contents observed, 756 acre-ft (932,000 m^3) Sept. 18-30, elevation, 836.0 ft (254.81 m); minimum, no contents, Oct. 21 to Feb. 6.

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30	817.0	393	-
Oct. 31	0	0	-393
Nov. 30	0	0	0
Dec. 31	0	0	0
CAL YR 1977	-	-	-645
Jan. 31	0	0	0
Feb. 28	835.0	733	+733
Mar. 31	835.0	733	0
Apr. 30	835.0	733	0
May 31	835.0	733	0
June 30	834.0	710	-23
July 31	834.0	710	0
Aug. 31	829.5	614	-96
Sept.30	836.0	756	+142
WTR YR 1978	-	-	+363

14196001 HASKINS CREEK BELOW RESERVOIR, NEAR MCMINNVILLE, OR

LOCATION.--Lat 45°18'40", long 123°20'55", in NW¼ sec.18, T.3 S., R.5 W., Yamhill County, Hydrologic Unit 17090008, on right bank 800 ft (244 m) downstream from Haskins Creek Reservoir, 11 mi (18 km) northwest of McMinnville, and at mile 5.0 (8.0 km).

DRAINAGE AREA.--6.90 mi^2 (17.87 km^2).

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WSP 1738: Drainage area. Maximum discharge for water year 1957, published in WSP 1518, has been found to be unreliable and should not be used.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 707 ft (215 m) National Geodetic Vertical Datum of 1929 (topographic survey of 1955). Prior to Aug. 5, 1952, water-stage recorder at site 600 ft (183 m) upstream at different datum.

REMARKS.--Records good except those below 2 ft^3/s (0.06 m^3/s), which are fair. All records given herein include flow in pipeline which diverts 600 ft (183 m) above station for municipal supply of McMinnville. Flow regulated by Haskin Creek Reservoir (see station 14195500); during winter months reservoir is empty except when inflow exceeds capacity of outlet tunnel. Monthly figures except for water years 1977 and 1978, adjusted for diversion from McGuire Lake in the Nestucca River basin and for storage in Haskins Creek Reservoir.

COOPERATION.--Meter readings for diversion and elevations of Haskins Creek Reservoir furnished by city of McMinnville.

AVERAGE DISCHARGE.--25 years (water years 1952-76), 33.7 ft^3/s (0.954 m^3/s), 66.33 in/yr (1,685 mm/yr), 24,420 acre-ft/yr (30.1 hm^3/yr), adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,030 ft^3/s (29.2 m^3/s) Dec. 23, 1964, gage height, 5.98 ft (1.823 m), from floodmark, from rating curve extended above 400 ft^3/s (11.3 m^3/s) on basis of slope-area measurement of peak flow; maximum daily, 515 ft^3/s (14.6 m^3/s) Jan. 21, 1972; minimum daily, 0.10 ft^3/s (0.003 m^3/s) Oct. 27, 28, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 442 ft^3/s (12.5 m^3/s) Dec. 13; minimum daily, 2.3 ft^3/s (0.065 m^3/s) Feb. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	41	53	30	65	36	17	21	15	5.5	13	4.4
2	3.4	48	222	26	83	33	21	20	15	5.1	11	4.3
3	3.4	31	192	37	41	30	21	18	15	6.3	11	4.6
4	6.0	25	116	51	2.3	32	23	17	13	8.1	12	4.3
5	4.2	25	79	100	3.3	26	33	17	12	7.0	10	5.4
6	7.1	22	85	101	14	25	28	16	12	11	9.6	5.7
7	4.6	21	76	89	5.3	35	25	15	11	11	12	5.3
8	4.7	19	67	107	24	35	23	15	11	9.2	15	4.3
9	3.4	17	59	98	92	30	21	15	9.8	8.4	14	4.1
10	6.9	15	72	87	74	27	19	15	13	7.8	11	4.2
11	4.4	16	116	74	71	25	19	20	12	9.1	9.6	4.7
12	6.4	15	142	65	61	25	18	17	12	10	6.5	6.7
13	6.3	19	442	77	49	25	17	34	11	11	5.4	12
14	5.1	57	401	77	54	23	18	44	12	12	11	11
15	5.3	67	359	73	41	23	18	48	12	7.0	7.4	4.2
16	5.2	53	282	80	47	22	17	37	11	4.4	6.6	4.3
17	6.0	39	185	78	45	20	20	33	12	6.5	5.9	5.3
18	5.8	33	143	84	44	19	26	28	12	8.9	6.1	7.8
19	5.7	28	115	67	33	19	25	26	12	11	6.3	7.8
20	5.7	22	91	79	31	18	25	24	7.5	11	6.3	6.0
21	54	24	76	92	34	18	29	21	6.5	13	4.6	7.5
22	85	22	64	88	33	17	44	21	12	13	4.1	8.4
23	71	31	56	82	29	21	41	20	12	8.8	4.7	7.6
24	24	66	52	67	34	26	38	21	6.0	11	5.1	8.0
25	7.5	120	48	60	57	29	33	21	6.4	12	4.9	6.9
26	7.5	238	46	51	47	24	30	20	11	10	4.7	6.3
27	6.3	146	36	46	32	23	26	19	16	9.4	4.7	6.3
28	8.4	73	36	43	42	21	24	18	9.3	9.6	6.6	4.6
29	19	68	36	39	---	20	23	17	9.9	10	5.1	5.3
30	37	55	35	37	---	20	22	16	9.4	10	6.0	5.5
31	23	---	30	40	---	16	---	16	---	11	6.2	---
TOTAL	447.5	1456	3812	2145	1187.9	763	744	690	338.8	288.1	246.4	182.8
MEAN	14.4	48.5	123	69.2	42.4	24.6	24.8	22.3	11.3	9.29	7.95	6.09
MAX	85	238	442	107	92	36	44	48	16	13	15	12
MIN	3.4	15	30	26	2.3	16	17	15	6.0	4.4	4.1	4.1
AC-FT	888	2890	7560	4250	2360	1510	1480	1370	672	571	489	363

CAL YR 1977 TOTAL 9433.1 MEAN 25.8 MAX 442 MIN 1.5 AC-FT 18710
WTR YR 1978 TOTAL 12301.5 MEAN 33.7 MAX 442 MIN 2.3 AC-FT 24400

14198500 MOLALLA RIVER ABOVE PINE CREEK, NEAR WILHOIT, OR

LOCATION.--Lat 45°00'35", long 122°28'45", in NE¼NE¼ sec.31, T.6 S., R.3 E., Clackamas County, Hydrologic Unit 17090009, on right bank 0.5 mi (0.8 km) upstream from Pine Creek, 5 mi (8 km) southeast of Wilhoit, and at mile 32.5 (52.3 km).

DRAINAGE AREA.--97.0 mi² (251.2 km²), at gaging cable 0.2 mi (0.3 km) downstream.

PERIOD OF RECORD.--October 1935 to current year.

REVISED RECORDS.--WSP 1738: Drainage area. WDR OR-75-1: 1967(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 791.35 ft (241.203 m) National Geodetic Vertical Datum of 1929 (Bureau of Public Roads bench mark). Oct. 1, 1935, to Sept. 30, 1945, and Oct. 1, 1945, to Feb. 9, 1961, water-stage recorder at site 0.3 mi (0.5 km) downstream at datums 8.42 ft (2.566 m) and 10.44 ft (3.182 m) lower, respectively. Feb. 10, 1961, to July 21, 1966, water-stage recorder at site 0.2 mi (0.3 km) downstream at datum 5.99 ft (1.826 m) lower.

REMARKS.--Records good. No regulation or diversion above station. Records given herein are for measuring site.

AVERAGE DISCHARGE.--43 years, 549 ft³/s (15.55 m³/s), 76.86 in/yr (1,952 mm/yr), 397,800 acre-ft/yr (490 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,300 ft³/s (688 m³/s) Dec. 22, 1964, gage height, 16.3 ft (4.97 m), from floodmark, site and datum then in use, from rating curve extended above 5,200 ft³/s (147 m³/s); minimum, 18 ft³/s (0.51 m³/s) Oct. 3, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,600 ft³/s (102 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	1400	9,120	258	10.62	3.237	Dec. 13	1430	*10,600	300	*11.24	3.426
Dec. 2	1700	4,800	136	8.33	2.539						

Minimum, 74 ft³/s (2.10 m³/s) Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	370	1310	1000	494	746	460	212	621	279	142	92	126
2	282	1780	2710	473	1570	420	240	521	259	154	92	120
3	237	1100	2570	1040	1460	380	269	452	237	158	91	117
4	199	759	2090	1660	1150	340	269	415	219	156	91	120
5	173	579	1510	1640	998	320	395	370	202	149	90	140
6	173	467	2440	2160	998	300	382	335	186	142	89	156
7	313	478	2410	1470	1150	280	329	297	177	135	89	162
8	275	442	1550	1400	1240	300	292	275	171	131	86	164
9	222	395	1100	1300	1080	320	275	272	175	130	84	266
10	189	358	1180	1200	880	300	282	297	292	126	83	644
11	171	307	3180	950	740	280	297	510	352	125	83	721
12	160	292	3070	1100	644	280	272	649	279	122	90	499
13	154	527	7040	1000	561	280	250	709	279	118	112	364
14	140	991	4880	900	510	270	250	1640	302	115	101	289
15	130	1430	4180	800	488	260	233	2050	521	115	125	250
16	126	1240	2500	750	442	250	253	1510	442	140	131	219
17	122	950	1830	900	428	250	297	1090	346	128	133	256
18	120	746	1380	1000	435	250	421	838	289	122	118	401
19	115	591	1050	1000	457	240	462	673	259	117	111	329
20	111	478	852	950	478	230	516	573	237	112	135	269
21	108	408	715	1000	478	230	544	488	215	109	175	237
22	102	527	649	1100	442	240	746	435	199	106	215	205
23	126	894	661	850	401	280	772	382	192	103	202	189
24	156	1660	1100	697	395	380	715	370	183	102	240	168
25	473	7470	1130	632	457	364	798	401	189	101	307	154
26	544	1530	894	579	785	307	1450	358	175	100	233	142
27	335	1320	727	521	673	282	1510	428	164	101	186	133
28	259	1260	632	494	541	262	1160	510	156	98	162	126
29	421	1570	627	478	---	247	908	447	151	97	146	122
30	1060	1260	621	442	---	240	733	376	149	96	135	117
31	1100	---	567	435	---	226	---	318	---	94	131	---
TOTAL	8466	33119	56845	29415	20627	9068	15532	18610	7276	3744	4158	7205
MEAN	273	1104	1834	949	737	293	518	600	243	121	134	240
MAX	1100	7470	7040	2160	1570	460	1510	2050	521	158	307	721
MIN	102	292	567	435	395	226	212	272	149	94	83	117
CFSM	2.81	11.4	18.9	9.78	7.60	3.02	5.34	6.19	2.51	1.25	1.38	2.47
IN.	3.25	12.70	21.80	11.28	7.91	3.48	5.96	7.14	2.79	1.44	1.59	2.76
AC-FT	16790	65690	112800	58340	40910	17990	30810	36910	14430	7430	8250	14290

CAL YR 1977 TOTAL 177640 MEAN 487 MAX 7470 MIN 51 CFSM 5.02 IN 68.13 AC-FT 352300
WTR YR 1978 TOTAL 214065 MEAN 586 MAX 7470 MIN 83 CFSM 6.04 IN 82.09 AC-FT 424600

14200000 MOLALLA RIVER NEAR CANBY, OR

LOCATION.--Lat 45°14'40", long 122°41'10", in NW¼NE¼ sec.9, T.4 S., R.1 E., Clackamas County, Hydrologic Unit 17090009, on left bank at upstream side of Goods bridge, 1.5 mi (2.4 km) south of Canby, and at mile 6.01 (9.67 km).

DRAINAGE AREA.--323 mi^2 (837 km^2).

PERIOD OF RECORD.--August 1928 to September 1959, October 1963 to September 1978 (discontinued).

REVISED RECORDS.--WSP 1248: 1929-30, 1932.

GAGE.--Water-stage recorder. Datum of gage is 104.00 ft (31.699 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 24, 1933, nonrecording gage and Oct. 24, 1933, to Sept. 26, 1955, water-stage recorder at present site and at datum 1.00 ft (0.305 m) higher. Sept. 27, 1955, to June 3, 1956, water-stage recorder at site 145 ft (44 m) downstream at present datum. June 4, 1956, to Sept. 30, 1959, water-stage recorder at site 0.3 mi (0.5 km) downstream at datum 1.98 ft (0.604 m) lower. Oct. 1, 1963, to May 4, 1964, nonrecording gage at present site and datum.

REMARKS.--Records fair. No regulation. Numerous small diversions for irrigation above station.

AVERAGE DISCHARGE.--46 years, 1,163 ft^3/s (32.94 m^3/s), 48.90 in/yr (1,242 mm/yr), 842,600 acre-ft/yr (1.04 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,600 ft^3/s (1,230 m^3/s) Dec. 22, 1964, gage height, 16.76 ft (5.108 m); minimum, 20 ft^3/s (0.57 m^3/s) Aug. 27, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,200 ft^3/s (204 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2230	15,000	425	10.00	3.048	Dec. 13	2100	*17,400	493	*10.74	3.274
Dec. 2	2230	9,400	266	8.06	2.457						

Minimum, 101 ft^3/s (2.86 m^3/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	873	1770	2520	1360	1300	1050	405	1550	769	270	165	215
2	638	3100	4470	1280	2450	932	429	1280	697	270	157	197
3	498	2010	6630	1500	2780	790	495	1090	637	316	154	193
4	407	1350	5250	3040	2360	730	478	932	580	348	154	210
5	351	1170	4230	2620	2040	670	590	879	541	323	161	259
6	320	968	4400	4950	2070	630	707	760	421	298	161	304
7	414	911	5310	3790	2140	600	618	717	429	293	140	323
8	483	891	3700	3500	2520	660	541	677	405	316	124	316
9	401	809	2860	3250	2300	700	504	637	383	304	124	398
10	363	748	2820	2840	1960	670	469	707	495	298	115	808
11	320	647	5710	2450	1710	640	469	848	637	293	115	1580
12	297	585	6400	2300	1500	620	429	1280	580	287	124	1490
13	281	791	10700	2130	1340	640	390	1320	600	265	189	980
14	251	1210	11400	2020	1190	610	469	2980	628	244	206	830
15	241	2810	9560	1850	1160	580	461	4720	943	224	210	740
16	236	2540	6590	1730	1050	550	495	3470	911	293	235	640
17	227	1720	4850	1960	1000	540	560	2510	687	304	220	570
18	218	1370	3790	2050	965	551	697	2100	628	265	189	940
19	210	1110	2980	2130	965	541	818	1670	495	244	165	810
20	194	949	2410	1910	974	461	1030	1370	445	224	193	730
21	194	800	2030	1940	974	421	1050	1260	398	234	329	650
22	186	960	1770	2230	932	413	1350	1120	383	215	413	570
23	194	1600	1600	1960	869	445	1530	1030	369	206	551	520
24	232	5300	1870	1490	838	647	1340	954	355	189	436	450
25	461	12500	2120	1520	900	628	1320	1100	348	180	541	400
26	774	8820	1830	1440	1310	560	2980	983	323	168	436	370
27	629	4690	1590	1300	1360	522	4350	1060	293	165	355	330
28	513	3580	1400	1270	1190	487	3170	1210	298	161	304	300
29	544	3490	1390	1260	---	461	2470	1120	276	172	265	280
30	1370	3130	1440	1140	---	436	1930	993	254	180	239	260
31	1820	---	1440	1140	---	429	---	869	---	172	224	---
TOTAL	14140	72329	125060	65350	42147	18614	32544	43196	15208	7721	7394	16663
MEAN	456	2411	4034	2108	1505	600	1085	1393	507	249	239	555
MAX	1820	12500	11400	4950	2780	1050	4350	4720	943	348	551	1580
MIN	186	585	1390	1140	838	413	390	637	254	161	115	193
CFSM	1.41	7.46	12.5	6.53	4.66	1.86	3.36	4.31	1.57	.77	.74	1.72
IN.	1.63	8.33	14.40	7.53	4.85	2.14	3.75	4.97	1.75	.89	.85	1.92
AC-FT	28050	143500	248100	129600	83600	36920	64550	85680	30170	15310	14670	33050

CAL YR 1977 TOTAL 383686 MEAN 1051 MAX 12500 MIN 65 CFSM 3.25 IN 44.19 AC-FT 761000
WTR YR 1978 TOTAL 460366 MEAN 1261 MAX 12500 MIN 115 CFSM 3.90 IN 53.02 AC-FT 913100

14200300 SILVER CREEK AT SILVERTON, OR

LOCATION.--Lat 45°00'34", long 122°47'15", in NE¼ sec.34, T.6 S., R.1 W., Marion County, Hydrologic Unit 17090009, on right bank 300 ft (91 m) downstream from railroad bridge in Silverton, 2.5 mi (4.0 km) upstream from Brush Creek, and at mile 3.4 (5.5 km).

DRAINAGE AREA.--47.9 mi² (124.1 km²).

PERIOD OF RECORD.--October 1963 to September 1968, October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 218.5 ft (66.60 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No regulation. Several small diversions for irrigation and municipal use above station.

AVERAGE DISCHARGE.--13 years, 212 ft³/s (6.004 m³/s), 60.10 in/yr (1,527 mm/yr), 153,600 acre-ft/yr (189 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,900 ft³/s (167 m³/s) Dec. 22, 1964, gage height, 11.15 ft (3.399 m); minimum, 2.0 ft³/s (0.057 m³/s) Aug. 20, 21, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	1930	2,640	74.8	7.00	2.134	Dec. 13	1830	*3,030	85.8	*7.54	2.298
Dec. 2	1930	2,730	77.3	7.13	2.173	Jan. 6	0300	1,300	36.8	4.94	1.506

Minimum, 9.4 ft³/s (0.27 m³/s) Aug. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	347	497	258	258	166	71	255	86	44	15	31
2	79	493	1350	240	409	154	107	221	79	52	14	28
3	69	337	1490	314	401	143	127	194	71	59	15	29
4	62	269	1160	424	347	141	114	178	64	54	14	43
5	55	246	801	489	321	131	137	168	59	48	13	62
6	54	202	915	1140	341	121	141	143	54	43	13	59
7	88	213	995	796	372	121	125	129	50	37	12	55
8	80	176	717	648	361	133	115	117	47	35	11	52
9	66	157	561	544	344	121	107	117	51	35	11	86
10	59	137	584	473	302	110	100	119	88	34	12	166
11	52	127	898	401	272	108	94	141	91	33	10	181
12	48	121	920	379	255	110	88	141	66	36	15	133
13	45	188	2210	351	235	112	86	150	88	37	30	110
14	44	246	2040	324	218	107	115	368	146	34	24	107
15	41	548	1910	293	232	99	105	481	159	37	25	92
16	37	473	1330	305	205	94	117	390	117	89	54	82
17	35	351	1010	347	196	91	146	305	102	66	40	77
18	34	299	765	331	181	85	183	255	91	45	28	82
19	33	249	588	331	168	83	210	216	88	37	24	69
20	32	210	477	324	159	79	224	186	79	33	47	63
21	32	186	397	390	150	76	252	161	71	29	80	63
22	30	305	351	477	141	69	416	146	69	26	69	60
23	51	489	314	397	135	94	431	135	68	24	59	66
24	56	661	409	344	135	119	341	123	63	22	60	56
25	125	2300	458	308	154	100	299	123	68	19	82	52
26	141	1610	365	287	240	88	579	114	60	20	63	48
27	102	1000	311	252	207	83	557	148	56	21	50	45
28	89	702	272	238	181	79	442	152	50	21	41	41
29	129	741	284	221	---	76	347	121	47	20	35	39
30	213	593	308	199	---	76	296	107	47	19	31	39
31	361	---	290	202	---	72	---	97	---	16	30	---
TOTAL	2434	13976	24977	12027	6920	3241	6472	5701	2275	1125	1027	2116
MEAN	78.5	466	806	388	247	105	216	184	75.8	36.3	33.1	70.5
MAX	361	2300	2210	1140	409	166	579	481	159	89	82	181
MIN	30	121	272	199	135	69	71	97	47	16	10	28
CFSM	1.64	9.73	16.8	8.10	5.16	2.19	4.51	3.84	1.58	.76	.69	1.47
IN.	1.89	10.85	19.40	9.34	5.37	2.52	5.03	4.43	1.77	.87	.80	1.64
AC-FT	4830	27720	49540	23860	13730	6430	12840	11310	4510	2230	2040	4200

CAL YR 1977 TOTAL 73875.9 MEAN 202 MAX 2300 MIN 5.2 CFSM 4.22 IN 57.37 AC-FT 146500
WTR YR 1978 TOTAL 82291.0 MEAN 225 MAX 2300 MIN 10 CFSM 4.70 IN 63.91 AC-FT 163200

14201500 BUTTE CREEK AT MONITOR, OR

LOCATION.--Lat 45°06'06", long 122°44'42", in SE¼SE¼ sec.25, T.5 S., R.1 W., Marion County, Hydrologic Unit 17090009, on left bank at downstream side of highway bridge at Monitor and at mile 7.7 (12.4 km).

DRAINAGE AREA.--58.7 mi^2 (152.0 km^2).

PERIOD OF RECORD.--January to December 1936, October 1940 to September 1952, October 1966 to current year. Monthly discharge only for January to December 1936, published in WSP 1318.

REVISED RECORDS.--WSP 2135: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 155 ft (47.2 m) from topographic map. Jan. 20 to Oct. 22, 1936, nonrecording gage at present site at different datum. Oct. 23 to Dec. 19, 1936, nonrecording gage at site 70 ft (21 m) downstream at different datum. Oct. 1, 1940, to Sept. 30, 1952, nonrecording gage at present site at 151.35 ft (46.131 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No regulation. Diversions for irrigation by pumping above station.

AVERAGE DISCHARGE.--24 years (water years 1941-52, 1967-78), 224 ft^3/s (6.344 m^3/s), 51.82 in/yr (1,316 mm/yr), 162,300 acre-ft/yr (200 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,310 ft^3/s (207 m^3/s) Jan. 21, 1972, gage height, 15.26 ft (4.651 m), from floodmark; minimum, 0.15 ft^3/s (0.004 m^3/s) Aug. 25, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s (42.5 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2000	3,190	90.3	10.29	3.136
Dec. 2	2000	2,740	77.6	9.72	2.963
Dec. 13	1900	*3,960	112	*11.40	3.475

Minimum, 3.3 ft^3/s (0.093 m^3/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	368	397	227	235	159	78	290	85	35	6.9	26
2	71	654	1160	214	445	144	95	246	78	39	6.4	24
3	62	382	1470	310	465	132	108	211	71	51	5.7	25
4	53	264	1080	561	394	130	107	193	66	49	5.7	32
5	48	222	810	568	351	120	138	178	61	44	6.2	48
6	44	174	904	1200	376	108	144	152	56	36	6.4	54
7	56	157	1010	851	429	110	134	130	53	32	7.5	50
8	59	138	694	748	462	128	126	117	50	28	6.9	46
9	50	120	515	658	442	120	115	113	52	28	4.9	71
10	45	111	476	551	371	112	105	120	77	26	4.5	152
11	41	102	1120	455	321	112	108	155	84	25	5.5	193
12	39	100	1130	429	283	108	102	171	67	22	7.5	136
13	37	162	2500	391	249	107	95	201	78	19	20	107
14	35	224	2480	368	227	102	117	619	95	18	15	97
15	33	559	2430	329	220	95	110	833	138	20	21	85
16	31	498	1620	331	193	92	113	590	108	45	34	74
17	30	354	1160	397	184	88	132	429	94	36	31	81
18	28	277	866	404	173	84	180	329	84	26	22	124
19	27	219	654	407	164	80	220	264	78	22	19	95
20	26	180	523	362	155	76	269	220	71	19	32	84
21	25	154	429	391	146	73	288	189	65	15	57	77
22	24	219	368	429	136	71	376	168	62	13	68	71
23	33	470	326	371	128	87	379	148	60	13	61	68
24	42	701	376	323	130	130	329	134	58	12	54	60
25	91	2440	401	293	146	119	305	142	58	10	69	56
26	115	1600	337	267	222	105	828	122	54	10	58	52
27	91	875	290	235	201	99	815	136	50	11	48	48
28	79	590	255	222	180	92	572	136	43	10	40	45
29	107	579	267	207	---	88	432	117	40	9.3	34	43
30	282	486	276	189	---	85	348	103	39	10	30	40
31	388	---	253	187	---	81	---	95	---	9.0	28	---
TOTAL	2174	13379	26577	12875	7428	3237	7268	7051	2075	742.3	815.1	2164
MEAN	70.1	446	857	415	265	104	242	227	69.2	23.9	26.3	72.1
MAX	388	2440	2500	1200	465	159	828	833	138	51	69	193
MIN	24	100	253	187	128	71	78	95	39	9.0	4.5	24
CFSM	1.19	7.60	14.6	7.07	4.51	1.77	4.12	3.87	1.18	.41	.45	1.23
IN.	1.38	8.48	16.84	8.16	4.71	2.05	4.61	4.47	1.31	.47	.52	1.37
AC-FT	4310	26540	52720	25540	14730	6420	14420	13990	4120	1470	1620	4290

CAL YR 1977 TOTAL 69793.8 MEAN 191 MAX 2500 MIN 1.2 CFSM 3.25 IN 44.23 AC-FT 138400
WTR YR 1978 TOTAL 85785.4 MEAN 235 MAX 2500 MIN 4.5 CFSM 4.00 IN 54.36 AC-FT 170200

14202965 HENRY HAGG LAKE NEAR GASTON, OR

LOCATION.--Lat 45°28'25", long 123°11'51", in SE¼NE¼ sec.20, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, at left end of Scoggins Dam on Scoggins Creek, 3.8 mi (6.1 km) northwest of Gaston, and at mile 4.9 (7.9 km).

DRAINAGE AREA.--38.7 mi^2 (100.2 km^2).

PERIOD OF RECORD.--January 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by earthfill dam with gated concrete spillway and a gated outlet tunnel. Storage began in January 1975. Total capacity at elevation 305.7 ft (93.18 m), maximum water-surface elevation, is 63,360 acre-ft (78.1 hm^3), of which 56,160 acre-ft (69.2 hm^3) is active storage above elevation 239.3 ft (72.94 m), proposed minimum pool. Reservoir is used for irrigation, flood control, and recreation. Figures given herein represent active storage.

COOPERATION.--Capacity table and monthend elevations furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 53,660 acre-ft (66.2 hm^3) Apr. 30, 1975, elevation, 303.52 ft (92.513 m); minimum observed since first filling, 808 acre-ft (1.00 hm^3) Oct. 31, 1975, elevation, 237.21 ft (72.302 m).

EXTREMES FOR CURRENT YEAR.--Maximum monthend contents, 53,540 acre-ft (66.0 hm^3) Apr. 30, elevation, 303.41 ft (92.479 m); minimum, 20,260 acre-ft (25.0 hm^3) Oct. 31, elevation, 268.78 ft (81.924 m).

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	269.84	21,110	-
Oct. 31	268.78	20,260	-850
Nov. 30	276.63	26,810	+6,550
Dec. 31	280.70	30,450	+3,640
CAL YR 1977	-	-	+7,820
Jan. 31	286.33	35,720	+5,270
Feb. 28	296.84	46,330	+10,610
Mar. 31	301.65	51,560	+5,230
Apr. 30	303.41	53,540	+1,980
May 31	303.27	53,380	-160
June 30	302.85	52,900	-480
July 31	298.96	48,610	-4,290
Aug. 31	292.37	41,690	-6,920
Sept. 30	283.48	33,020	-8,670
WTR YR 1978	-	-	+11,910

14202980 SCOGGINS CREEK BELOW HENRY HAGG LAKE, NEAR GASTON, OR

LOCATION.--Lat 45°28'10", long 123°11'56", in SE¼NE¼ sec.20, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on left bank 600 ft (183 m) downstream from Scoggins Dam, 800 ft (244 m) upstream from small left bank tributary, 3.7 mi (6.0 km) northwest of Gaston, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--38.8 mi^2 (100.5 km^2).

PERIOD OF RECORD.--January 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 187.48 ft (57.144 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow completely regulated by Henry Hagg Lake since January 1975. Discharge not adjusted for storage or release from Henry Hagg Lake as evaporation from reservoir at times exceeds natural flow.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,250 ft^3/s (35.4 m^3/s) Dec. 16, 1977, gage height, 13.50 ft (4.115 m); minimum, 1.5 ft^3/s (0.042 m^3/s) Sept. 26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,250 ft^3/s (35.4 m^3/s) Dec. 16, gage height, 13.50 ft (4.115 m); minimum, 7.7 ft^3/s (0.22 m^3/s) Oct. 7, Sept. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	14	368	99	38	42	18	56	36	41	111	8.0
2	83	14	398	99	39	42	18	70	31	42	111	7.7
3	83	14	407	99	99	42	44	78	31	42	123	7.7
4	83	14	402	98	138	42	60	78	31	41	124	7.7
5	73	14	397	158	138	42	61	62	31	41	124	8.0
6	68	14	395	258	77	42	70	55	31	41	123	78
7	30	14	392	274	40	43	76	55	31	44	123	152
8	14	14	392	279	40	43	75	55	31	44	122	186
9	14	14	330	341	40	43	75	55	32	44	122	188
10	14	14	283	387	104	43	66	55	32	44	122	188
11	14	14	287	384	149	43	59	69	32	51	122	189
12	14	13	291	383	149	43	58	77	93	58	122	190
13	13	13	343	220	149	43	59	78	135	67	122	196
14	12	43	336	134	149	43	58	220	41	85	121	216
15	12	95	360	134	149	29	58	298	41	111	121	215
16	12	95	719	135	149	25	58	228	40	111	121	215
17	12	95	1110	216	84	29	58	156	39	99	122	214
18	12	95	935	277	40	28	58	136	39	73	123	218
19	12	95	880	278	40	28	58	97	33	76	123	219
20	12	95	722	278	40	29	81	76	29	88	124	219
21	12	95	557	279	40	29	94	77	32	96	135	219
22	12	95	446	278	40	29	111	77	33	113	142	219
23	12	84	384	278	41	29	148	77	36	113	121	219
24	13	76	374	181	41	29	176	77	39	111	136	220
25	13	80	373	120	41	29	192	77	39	106	154	220
26	13	77	371	119	41	29	192	91	39	109	154	219
27	13	77	370	119	42	22	148	104	38	112	153	219
28	13	222	367	119	42	18	78	104	34	110	49	220
29	14	373	219	119	---	18	56	104	33	104	15	220
30	14	368	103	67	---	18	56	64	39	104	15	219
31	14	---	100	38	---	18	---	48	---	108	9.6	---
TOTAL	813	2340	13411	6248	2179	1032	2419	2954	1201	2429	3509.6	5116.1
MEAN	26.2	78.0	433	202	77.8	33.3	80.6	95.3	40.0	78.4	113	171
MAX	83	373	1110	387	149	43	192	298	135	113	154	220
MIN	12	13	100	38	38	18	18	48	29	41	9.6	7.7
AC-FT	1610	4640	26600	12390	4320	2050	4800	5860	2380	4820	6960	10150

CAL YR 1977 TOTAL 26207.1 MEAN 71.8 MAX 1110 MIN 5.3 AC-FT 51980
WTR YR 1978 TOTAL 43651.7 MEAN 120 MAX 1110 MIN 7.7 AC-FT 86580

14203500 TUALATIN RIVER NEAR DILLEY, OR

LOCATION.--Lat 45°28'30", long 123°07'23", in NE¼NW¼ sec.24, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on left bank 5 ft (2 m) upstream from highway bridge, 1.0 mi (1.6 km) south of Dilley, 1.2 mi (1.9 km) downstream from Scoggins Creek, and at mile 58.81 (94.63 km).

DRAINAGE AREA.--125 mi^2 (324 km^2).

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1940 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1935: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 147.57 ft (44.979 m) National Geodetic Vertical Datum of 1929. Prior to June 16, 1950, nonrecording gage at several sites within 200 ft (61 m) of present site at datum 4.00 ft (1.219 m) higher. June 16, 1950, to Aug. 10, 1966, water-stage recorder at present site at datum 4.00 ft (1.219 m) higher.

REMARKS.--Records good. Diurnal fluctuation caused by operation of millpond on Scoggins Creek above station and regulation by Henry Hagg Lake since January 1975. Diversions above station of approximately 3,000 acre-ft (3.70 hm^3) from J.W. Barney Reservoir on the Middle Fork of North Fork Trask River for municipal water supply and irrigation in Wapato Lake area.

AVERAGE DISCHARGE.--39 years, 406 ft^3/s (11.50 m^3/s), 44.11 in/yr (1,120 mm/yr), 294,100 acre-ft/yr (363 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,100 ft^3/s (484 m^3/s) Dec. 22, 1964, gage height, 19.34 ft (5.895 m), from rating curve extended above 6,000 ft^3/s (170 m^3/s); minimum, 0.08 ft^3/s (0.002 m^3/s) Sept. 3, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,550 ft^3/s (185 m^3/s) Dec. 14, gage height, 18.63 ft (5.678 m); minimum, 29 ft^3/s (0.82 m^3/s) Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	303	869	392	609	369	142	280	120	72	119	31
2	116	546	1480	366	891	331	151	240	120	75	118	30
3	111	323	2560	399	966	308	177	220	100	75	120	30
4	113	217	1720	590	914	290	200	200	95	75	145	37
5	102	221	1250	778	825	269	283	200	90	75	144	37
6	88	175	1140	1120	777	245	299	180	90	71	141	64
7	84	167	1120	1060	824	276	284	170	90	70	141	155
8	65	149	1010	1090	1090	366	262	160	95	70	137	213
9	56	134	896	1210	1120	323	231	150	98	70	132	302
10	49	127	839	1220	978	293	193	155	100	70	131	370
11	45	119	1030	1100	894	278	184	198	100	75	132	332
12	41	114	1350	1010	793	258	185	225	110	79	132	288
13	38	134	3290	918	702	257	186	310	247	87	136	278
14	34	368	5170	885	640	247	194	652	111	103	134	282
15	32	605	3800	821	625	221	186	784	107	125	137	287
16	32	557	3690	831	578	193	199	726	99	135	144	279
17	31	437	3040	885	503	180	269	574	94	129	144	276
18	30	366	2360	938	407	169	307	466	88	99	143	275
19	30	310	1940	1070	379	160	350	388	85	99	144	273
20	30	269	1610	1030	354	151	397	310	71	106	149	275
21	30	244	1340	1010	329	144	480	274	73	107	168	274
22	30	234	1100	1040	304	137	509	256	75	124	181	275
23	31	232	1000	968	287	154	550	241	79	123	166	286
24	37	487	950	863	299	202	600	233	82	121	170	281
25	45	1250	900	696	467	300	550	240	79	116	199	279
26	51	2020	850	609	506	281	500	240	80	116	195	278
27	53	1230	800	538	454	232	440	220	77	122	187	275
28	56	905	753	494	410	194	380	200	70	124	140	271
29	70	974	685	461	---	176	340	180	66	117	49	271
30	281	936	498	409	---	160	300	160	73	116	37	271
31	293	---	437	359	---	150	---	140	---	116	34	---
TOTAL	2225	14153	49677	25160	17925	7314	9319	8972	2864	3062	4249	6875
MEAN	71.8	472	1596	812	640	236	311	289	95.5	98.8	137	229
MAX	293	2020	5170	1220	1120	369	600	784	247	135	199	370
MIN	30	114	437	359	287	137	142	140	66	70	34	30
AC-FT	4410	28070	98140	49900	35550	14510	18480	17800	5680	6070	8430	13640

CAL YR 1977 TOTAL 94622 MEAN 259 MAX 5170 MIN 22 AC-FT 187700
WTR YR 1978 TOTAL 151595 MEAN 415 MAX 5170 MIN 30 AC-FT 300700

14204500 GALES CREEK NEAR FOREST GROVE, OR

LOCATION.--Lat 45°33'20", long 123°11'10", in SE¼ sec.21, T.1 N., R.4 W., Washington County, Hydrologic Unit 17090010, on left bank 50 ft (15 m) downstream from Roderick road bridge, 0.1 mi (0.2 km) below Kelly Creek, 2.5 mi (4.0 km) southeast of town of Gales Creek, 4.5 mi (7.2 km) northwest of Forest Grove, and at mile 8.7 (14.0 km).

DRAINAGE AREA.--66.1 mi^2 (171.2 km^2).

PERIOD OF RECORD.--October 1940 to September 1956, October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 201.81 ft (61.512 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 13, 1941, at site 1.4 mi (2.3 km) downstream at datum 14.33 ft (4.368 m) lower. Sept. 13, 1941, to June 19, 1952, at downstream side of bridge at datum 1.44 ft (0.439 m) higher. June 20, 1952, to Jan. 3, 1956, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records fair. No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--24 years, 232 ft^3/s (6.570 m^3/s), 47.66 in/yr (1,211 mm/yr), 168,100 acre-ft/yr (207 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,410 ft^3/s (182 m^3/s) Feb. 17, 1949, gage height, 10.90 ft (3.322 m), from floodmark, site and datum then in use; maximum gage height, 12.95 ft (3.947 m), from floodmark, Jan. 21, 1972; minimum discharge, 1 ft^3/s (0.028 m^3/s) Aug. 19, 1947.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s (56.6 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	1730	2,360	66.8	7.55	2.301	Dec. 13	1630	*6,070	172	*12.02	3.664

Minimum, 10 ft^3/s (0.28 m^3/s) Aug. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	298	296	188	550	280	160	148	92	35	22	19
2	25	461	909	182	850	260	180	136	86	36	21	20
3	22	252	893	235	800	240	180	128	81	36	21	21
4	21	188	589	397	650	240	190	126	74	35	20	27
5	20	188	447	774	550	220	260	123	69	33	20	25
6	19	146	559	812	500	210	240	112	78	31	19	22
7	46	134	502	682	700	250	220	106	63	30	18	22
8	48	118	426	804	850	240	190	100	62	30	18	26
9	35	108	367	838	900	220	170	100	68	30	17	69
10	28	114	434	688	700	210	150	99	68	31	15	76
11	25	109	861	571	550	210	140	130	67	31	11	52
12	22	106	1080	516	460	200	130	122	63	30	13	37
13	19	133	4260	568	380	210	130	250	63	28	15	35
14	17	392	3320	659	360	190	130	450	64	26	16	31
15	17	510	3150	598	320	180	130	426	41	27	18	26
16	15	418	2340	663	300	170	126	345	42	37	18	23
17	13	314	1400	635	280	170	123	282	41	33	18	23
18	13	261	969	641	260	160	160	241	39	33	17	22
19	13	215	710	710	240	150	178	209	41	29	18	20
20	13	182	571	619	220	150	178	186	38	28	22	20
21	13	160	477	669	200	140	213	165	39	26	30	20
22	13	148	408	675	190	140	405	153	39	25	25	22
23	21	165	360	595	180	170	385	148	40	23	24	25
24	25	355	317	508	180	220	314	146	41	23	31	23
25	36	1470	287	440	380	240	267	141	40	24	28	22
26	47	1200	258	360	400	220	237	139	42	23	24	22
27	41	653	237	320	340	200	209	134	37	26	20	21
28	38	453	223	300	300	190	189	122	35	26	18	21
29	70	413	227	260	---	180	171	114	35	24	17	22
30	217	331	225	250	---	160	160	106	38	23	16	21
31	180	---	203	340	---	155	---	97	---	22	18	---
TOTAL	1162	9995	27305	16497	12590	6175	5915	5284	1626	894	608	835
MEAN	37.5	333	881	532	450	199	197	170	54.2	28.8	19.6	27.8
MAX	217	1470	4260	838	900	280	405	450	92	37	31	76
MIN	13	106	203	182	180	140	123	97	35	22	11	19
CFSM	.57	5.04	13.3	8.05	6.81	3.01	2.98	2.57	.82	.44	.30	.42
IN.	.65	5.62	15.37	9.28	7.09	3.48	3.33	2.97	.92	.50	.34	.47
AC-FT	2300	19830	54160	32720	24970	12250	11730	10480	3230	1770	1210	1660

CAL YR 1977 TOTAL 55434.0 MEAN 152 MAX 4260 MIN 3.5 CFSM 2.30 IN 31.20 AC-FT 110000
WTR YR 1978 TOTAL 88886.0 MEAN 244 MAX 4260 MIN 11 CFSM 3.69 IN 50.02 AC-FT 176300

NOTE.--No gage-height record Jan. 25 to Apr. 14.

14207000 OSWEGO CANAL NEAR LAKE OSWEGO, OR

LOCATION.--Lat 45°23'20", long 122°43'10", in NW¼NW¼ sec.20, T.2 S., R. 1 E., Clackamas County, Hydrologic Unit 17090010, on left bank 0.4 mi (0.6 km) downstream from point of diversion on Tualatin River, 1.0 mi (1.6 km) upstream from Lake Oswego, and 3.5 mi (5.6 km) southwest of Oswego.

PERIOD OF RECORD.--October 1928 to current year. October 1951 to September 1970, Oswego Canal records were not published separately, but were combined with records for Tualatin River at West Linn.

GAGE.--Water-stage recorder. Datum of gage is 96.50 ft (29.413 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 15, 1928, nonrecording gage 800 ft (244 m) upstream at different datum. Nov. 15, 1928, to June 29, 1939, nonrecording gage 900 ft (274 m) downstream at datum about 1.0 ft (0.3 m) higher.

REMARKS.--Records good. Oswego Canal diverts water from Tualatin River in NW¼ sec.20, but diversion dam is in NE¼ sec.33, about 3 mi (5 km) downstream. Water used for recreational facilities and development of power below Lake Oswego and returned to Willamette River at that point.

AVERAGE DISCHARGE.--50 years, 70.0 ft^3/s (1.982 m^3/s), 50,720 acre-ft/yr (62.5 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 6,000 ft^3/s (170 m^3/s) Dec. 23, 1933; no flow at times.

DISCHARGE, IN CUBIC FEET PEP SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	51	45	60	3.7	84	50	50	48	51	55	49
2	49	47	53	56	3.9	81	49	47	47	51	52	54
3	49	50	54	55	3.7	77	49	45	44	51	58	57
4	50	47	51	27	3.7	74	49	49	41	56	57	65
5	50	41	51	4.4	3.7	71	53	50	39	60	56	76
6	50	38	51	3.8	3.7	68	55	49	42	60	56	78
7	50	42	50	3.8	35	66	57	47	49	59	56	68
8	52	45	49	3.8	71	69	56	45	47	57	55	67
9	53	45	47	3.8	71	75	54	45	47	56	54	78
10	53	42	47	3.8	70	73	52	45	49	55	53	83
11	50	40	53	3.8	70	70	50	46	50	55	52	70
12	45	40	84	3.8	70	68	48	47	51	55	53	55
13	41	42	116	3.8	69	67	47	54	50	54	50	46
14	38	45	63	3.8	67	65	47	63	54	54	49	41
15	37	55	59	3.8	65	63	47	55	55	55	52	39
16	34	64	66	3.8	62	61	49	49	52	53	49	37
17	33	59	114	3.8	59	59	49	48	49	48	43	35
18	34	56	93	3.8	56	57	51	45	47	54	41	35
19	37	51	79	3.9	52	56	56	51	46	57	41	35
20	42	46	111	3.8	49	54	61	56	57	55	40	33
21	45	46	102	4.0	47	53	65	51	89	54	45	32
22	47	45	98	3.8	60	51	70	48	91	52	50	31
23	48	40	97	3.7	70	50	76	49	91	50	53	29
24	49	53	91	3.8	69	52	77	50	92	50	51	29
25	55	59	85	3.7	71	55	73	48	92	49	47	29
26	53	44	78	3.7	81	59	73	47	87	49	47	27
27	50	48	73	3.6	87	61	68	47	73	49	47	27
28	51	47	70	3.5	87	60	62	48	61	44	45	26
29	49	48	68	3.4	---	58	58	47	60	53	35	25
30	51	47	81	3.3	---	55	54	49	55	59	22	25
31	50	---	65	3.4	---	53	---	49	---	61	24	---
TOTAL	1445	1423	2244	299.4	1460.4	1965	1705	1519	1755	1666	1488	1381
MEAN	46.6	47.4	72.4	9.66	52.2	63.4	56.8	49.0	58.5	53.7	48.0	46.0
MAX	55	64	116	60	87	84	77	63	92	61	58	83
MIN	33	38	45	3.3	3.7	50	47	45	39	44	22	25
AC-FT	2870	2820	4450	594	2900	3900	3380	3010	3480	3300	2950	2740

CAL YR 1977 TOTAL 20019.0 MEAN 54.8 MAX 116 MIN 12 AC-FT 39710
WTR YR 1978 TOTAL 18350.8 MEAN 50.3 MAX 116 MIN 3.3 AC-FT 36400

14207500 TUALATIN RIVER AT WEST LINN, OR
(National stream-quality accounting network station)

LOCATION.--Lat 45°21'03", long 122°40'30", in SW¼ sec.34, T.2 S., R.1 E., Clackamas County, Hydrologic Unit 17090010, on left bank 300 ft (90 m) upstream from bridge on State Highway 212, 0.4 mi (0.6 km) west of West Linn city limits, and at mile 1.8 (2.9 km).

DRAINAGE AREA.--706 mi² (1,829 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1928 to current year. Prior to October 1960, published as "near Willamette."

REVISED RECORDS.--WSP 1014: 1943. WSP 1184: 1947. WSP 1248: 1941. WSP 1935: Drainage area. WDR OR-75-1: 1974(M). WDR-OR-77-1: 1971-73, 1975, 1976(M).

GAGE.--Water-stage recorder. Datum of gage is 85.61 ft (26.094 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to June 12, 1941, nonrecording gage at datum 1.02 ft (0.311 m) higher.

REMARKS.--Water-discharge records good. October 1951 to September 1970, all records published for this station included the daily flow of Oswego Canal. October 1971 to current year, maximum discharge only includes flow in Oswego Canal. Oswego Canal diverts at point 5.0 mi (8.0 km) above station for development of power between outlet of Lake Oswego and Willamette River. Some regulation in low-water season by flashboards on crest of diversion dam for Oswego Canal and regulation by Henry Hagg Lake since January 1975. Several diversions above station for irrigation.

AVERAGE DISCHARGE.--50 years, 1,533 ft³/s (43.41 m³/s), 29.49 in/yr (749 mm/yr), 1,111,000 acre-ft/yr (1.37 km³/yr), adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,300 ft³/s (660 m³/s) Dec. 23, 1933, gage height, 17.72 ft (5.401 m); minimum daily, 0.20 ft³/s (0.006 m³/s) July 30 to Aug. 2, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,100 ft³/s (456 m³/s) Dec. 17, gage height, 14.16 ft (4.316 m); minimum, 50 ft³/s (1.42 m³/s) Aug. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	208	764	3400	2100	2460	2330	940	1270	649	153	77	60
2	203	753	3780	1830	3300	2120	897	1140	580	161	81	62
3	207	1040	4500	1720	3890	1920	897	1030	521	179	81	65
4	199	1160	4240	1990	4040	1750	891	959	471	188	80	70
5	183	885	4150	2740	4080	1620	972	897	437	182	76	79
6	171	737	4210	3740	4180	1500	1090	849	393	170	79	140
7	171	649	4140	4000	4370	1400	1210	781	370	153	83	173
8	187	550	3890	4250	4700	1550	1160	727	348	136	84	176
9	199	489	3610	4500	4810	1780	1070	680	334	126	83	282
10	197	433	3480	4730	4800	1710	991	649	345	118	80	503
11	175	393	4030	4810	4790	1570	915	654	363	113	77	843
12	150	385	4210	4830	4730	1490	855	685	374	109	79	826
13	135	441	6790	4800	4580	1430	803	879	370	106	80	721
14	122	480	7850	4790	4320	1360	809	1620	417	101	86	565
15	113	675	9000	4700	4030	1300	832	2580	441	101	113	503
16	108	1170	12700	4690	3640	1200	855	2900	393	170	146	467
17	103	1440	15600	4730	3280	1120	861	2780	363	279	250	437
18	86	1370	15300	4660	2860	1060	885	2430	338	285	267	433
19	76	1180	13500	4770	2430	1000	1000	2000	314	241	200	429
20	63	978	11400	4660	2100	946	1180	1660	213	192	185	409
21	68	814	9810	4660	1890	885	1350	1380	126	148	216	393
22	71	732	8440	4680	1720	849	1560	1190	142	122	241	385
23	76	721	7390	4580	1580	843	1840	1060	170	122	270	370
24	82	1090	6500	4470	1510	897	2190	1010	195	113	282	374
25	94	2230	5700	4330	1590	1040	2240	965	200	170	279	385
26	115	3560	4910	4150	2110	1200	2200	915	203	142	288	378
27	132	3800	4150	3850	2500	1310	2120	909	203	144	298	363
28	192	3820	3440	3490	2480	1260	1920	934	205	117	282	356
29	192	3840	3000	3110	---	1160	1660	891	179	62	338	348
30	295	3670	2700	2680	---	1080	1430	814	155	69	232	345
31	471	---	2390	2320	---	1010	---	737	---	73	128	---
TOTAL	4844	40249	198210	121360	92770	41690	37623	37975	9812	4545	5141	10940
MEAN	156	1342	6394	3915	3313	1345	1254	1225	327	147	166	365
MAX	471	3840	15600	4830	4810	2330	2240	2900	649	285	338	843
MIN	63	385	2390	1720	1510	843	803	649	126	62	76	60
AC-FT	9610	79830	393100	240700	184000	82690	74630	75320	19460	9020	10200	21700
MEAN†	203	1,389	6,465	3,924	3,365	1,408	1,311	1,274	386	200	214	411
CFSM†	.29	1.97	9.16	5.56	4.77	1.99	1.86	1.80	.55	.28	.30	.58
IN.†	.33	2.20	10.56	6.41	4.96	2.30	2.07	2.08	.61	.33	.35	.65
AC-FT†	12,480	82,650	397,600	241,300	186,900	86,590	78,010	78,330	22,940	12,320	13,150	24,440

CAL YR 1977 TOTAL 328,204 MEAN 899 MAX 15,600 MIN 18 AC-FT 651,000 MEAN† 954 CFSM† 1.35 IN.† 18.35 AC-FT† 690,700
WTR YR 1978 TOTAL 605,159 MEAN 1,658 MAX 15,600 MIN 60 AC-FT 1,200,000 MEAN† 1,708 CFSM† 2.42 IN.† 32.84 AC-FT† 1,236,400

† Adjusted for diversion of Oswego Canal.

14207500 TUALATIN RIVER AT WEST LINN, OR—Continued
(National stream quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1975 to current year.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: October 1975 to current year.
WATER TEMPERATURES: October 1975 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum daily recorded, 237 micromhos Feb. 15, 1977; minimum recorded, 62 micromhos Dec. 16, 1977.
WATER TEMPERATURES: Maximum, 27.5°C Aug. 6, 8, 9, 11, 17, 1977; minimum, 2.5°C Jan. 8-12, 1977.

EXTREMES FOR CURRENT YEAR.—
SPECIFIC CONDUCTANCE: Maximum daily recorded, 216 micromhos July 13; minimum recorded, 62 micromhos Dec. 16.
WATER TEMPERATURES: Maximum, 25.5°C Aug. 9; minimum, 3.5°C Jan. 4, 5,.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT										
05...	0815	185	13.8	7.0	6.8	171	--	130	22	14
NOV										
01...	1142	1000	11.6	8.3	6.9	196	170	K440	23	21
DEC										
02...	1200	3990	8.6	6.7	10.7	96	1200	2700	17	8.2
28...	1300	3400	5.6	6.9	11.1	95	320	110	18	9.1
JAN										
23...	1100	4540	8.1	7.2	11.4	93	580	1000	18	8.5
FEB										
17...	1000	3290	6.2	7.2	10.5	96	110	750	19	10
MAR										
17...	1420	1060	9.0	7.2	10.0	116	100	130	19	12
APR										
17...	1600	820	10.6	6.8	9.3	122	80	K170	20	11
MAY										
16...	1100	2880	11.5	7.0	11.2	112	K1700	2200	17	9.7
JUN										
19...	1200	295	18.3	7.3	7.5	150	91	125	23	12
JUL										
18...	1400	279	19.4	8.0	5.8	183	96	K23	26	15
AUG										
01...	1500	80	23.5	7.2	9.3	192	K17	K130	22	14

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT										
05...	4.5	13	2.5	43	15	13	.1	--	--	.18
NOV										
01...	5.9	4.3	3.0	55	12	14	.1	1.3	--	.53
DEC										
02...	2.8	5.3	1.5	24	4.9	7.0	.1	1.2	--	.03
28...	2.9	5.0	1.3	28	4.9	5.4	.1	.55	--	.24
JAN										
23...	3.1	4.9	1.1	23	4.1	5.2	.0	.24	.23	.16
FEB										
17...	3.0	5.3	1.1	30	5.9	4.7	.1	.39	.04	.17
MAR										
17...	4.0	7.8	1.2	37	7.6	6.3	.1	1.2	.81	.39
APR										
17...	3.6	7.3	1.2	43	3.9	6.2	.1	.62	.24	.50
MAY										
16...	3.3	6.0	1.2	36	4.6	5.5	.1	.41	--	.19
JUN										
19...	3.4	10	1.8	41	9.2	8.9	.1	.79	.52	.41
JUL										
18...	5.3	15	2.5	46	20	13	.1	1.2	.93	.67
AUG										
01...	4.8	15	2.6	43	19	14	.1	.89	.51	.59

14207500 TUALATIN RIVER AT WEST LINN, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
OCT 05...	1.6	--	.21	.34	--	--	--	54	11
NOV 01...	1.1	--	.32	.46	--	--	4.3	77	22
DEC 02...	2.1	--	.07	.23	--	--	4.9	32	8
28...	1.7	--	.09	.15	--	--	3.2	35	7
JAN 23...	1.6	2.0	.09	.18	--	--	3.9	34	11
FEB 17...	1.2	1.4	.09	.16	--	--	2.8	37	8
MAR 17...	1.0	2.2	.19	.29	--	--	2.3	46	10
APR 17...	.02	1.6	.21	.29	2.1	1.7	--	43	0
MAY 16...	.04	--	.09	.23	--	--	4.3	38	2
JUN 19...	1.2	2.1	.09	.17	--	--	3.1	44	3
JUL 18...	1.4	3.0	.10	.17	--	--	--	59	13
AUG 01...	1.6	2.7	.06	.12	--	--	--	55	12

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER DAY)	TURBIDITY (JTU)	TURBIDITY (NTU)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
OCT 05...	119	110	59.4	7	--	19	9.5	94	--
NOV 01...	135	117	364	15	--	18	49	93	19
DEC 02...	71	61	765	35	--	62	668	91	--
28...	74	63	679	20	--	21	193	94	--
JAN 23...	77	59	944	25	--	32	392	96	--
FEB 17...	70	67	622	20	--	20	178	98	--
MAR 17...	66	80	189	10	--	15	43	83	--
APR 17...	80	79	177	5	--	12	27	95	--
MAY 16...	84	70	653	--	27	38	295	94	--
JUN 19...	101	93	80.4	--	3.9	14	11	91	--
JUL 18...	125	125	94.2	--	2.8	12	9.0	93	--
AUG 01...	128	117	27.6	--	3.4	8	1.7	76	--

DATE	IRON, DISSOLVED (UG/L AS FE)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)
NOV 01...	120	1100	180	240	2	2	0	0	2
JAN 23...	490	2100	30	70	0	1	0	0	1
APR 17...	130	970	50	70	2	1	300	200	4
JUL 18...	30	490	20	140	3	2	200	200	3

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
NOV 01...	10	5	20	0	<50	10	10	4	100
JAN 23...	3	1	10	0	1	10	25	7	55
APR 17...	--	0	10	0	0	11	23	--	--
JUL 18...	2	0	0	2	2	6	8	5	18

14207500 TUALATIN RIVER AT WEST LINN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SILVER, DIS-SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SELE-NIUM, TOTAL (UG/L AS SE)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)
NOV								
01...	0	<10	30	40	0	0	.0	.0
JAN								
23...	0	1	20	60	0	0	.0	.0
APR								
17...	0	0	30	80	0	0	.0	.0
JUL								
18...	0	0	20	30	0	0	.0	.0

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SIMA-ZINE TOTAL COUL-SON COND. (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)
DEC								
02...	ND	ND	ND	ND	ND	ND	ND	ND
FEB								
17...	ND	ND	ND	ND	ND	ND	ND	ND
MAY								
16...	ND	ND	ND	ND	ND	ND	ND	ND
AUG								
01...	--	ND	ND	ND	ND	ND	ND	ND

DATE	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)
DEC									
02...	ND	ND	ND	ND	ND	ND	--	ND	ND
FEB									
17...	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY									
16...	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG									
01...	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
DEC								
02...	ND	ND	ND	ND	ND	ND	ND	ND
FEB								
17...	ND	ND	ND	ND	ND	ND	ND	ND
MAY								
16...	ND	ND	4.1	--	--	--	ND	ND
AUG								
01...	ND	ND	--	--	--	--	ND	ND

DATE	SIMA-ZINE IN BOTTOM MATERI-AL (UG/KG DRY SOLIDS)	P,P' DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	P,P' DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	P,P' DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
DEC											
02...	ND	4.3	2.9	2.0	ND	ND	4	1.4	ND	ND	ND
MAY											
16...	--	--	--	--	ND	ND	2	.7	ND	ND	ND

DATE	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	ATRA-ZINE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)
DEC											
02...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY											
16...	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND

14207500 TUALATIN RIVER AT WEST LINN, OR—Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO AUGUST 1978

		OCT 5,77	DEC 2,77	MAR 17,78	MAY 16,78
DATE		OCT 5,77	DEC 2,77	MAR 17,78	MAY 16,78
TIME		0815	1200	1420	1100
TOTAL CELLS/ML		5900	2100	3900	2100
DIVERSITY:	DIVISION	1.2	0.0	1.2	1.1
	.CLASS	1.3	0.0	1.2	1.1
	..ORDER	1.3	0.5	1.7	1.5
	...FAMILY	1.7	0.6	2.0	2.5
	....GENUS	2.5	0.6	2.0	3.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	110	6
...CHLOROCOCCACEAE								
....CHLOROCOCCUM	*	0	--	-	--	-	--	-
...HYDRODICTYACEAE								
....PEDIASTRUM	140	2	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	59	2	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	190	3	--	-	--	-	110	6
....CHLORELLA	--	-	--	-	--	-	43	2
....DICTYOSPHAERIUM	250	4	--	-	--	-	--	-
....KIRCHNERIELLA	*	0	--	-	970#	25	--	-
....OOCYSTIS	*	0	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	*	0	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	--	-
....CRUCIGENIA	110	2	--	-	--	-	--	-
....SCENEDESMUS	570	10	--	-	100	3	830#	40
....TETRASTRUM	--	-	--	-	--	-	170	8
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	--	-	--	-	14	1
...PHACOTACEAE								
....PTEROMONAS	--	-	--	-	--	-	--	-
..ZYGNEMATALES								
...DESMIDIACEAE								
....COSMARIUM	--	-	--	-	--	-	--	-
..CHLOROCOCCALES								
...OOCYSTACEAE								
....POLYEDRIOPSIS	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	1100#	19	--	-	85	2	--	-
....MELOSIRA	2800#	47	1900#	88	--	-	310#	15
....SKELETONEMA	32	1	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	*	0	29	1
....COCCONEIS	--	-	--	-	--	-	14	1
....RHOICOSPHENIA	--	-	--	-	--	-	--	-
...CYMBELLACEAE								
....CYMBELLA	--	-	--	-	--	-	14	1
...FRAGILARIACEAE								
....ASTERIONELLA	*	0	--	-	*	0	130	6
....FRAGILARIA	--	-	--	-	*	0	--	-
....SYNEDRA	--	-	--	-	34	1	72	3
...GOMPHONEMATACEAE								
....GOMPHONEMA	*	0	--	-	*	0	14	1
...NAVICULACEAE								
....NAVICULA	--	-	--	-	34	1	--	-
....NEIDIUM	--	-	--	-	--	-	14	1
....PINNULARIA	--	-	120	6	--	-	--	-
....STAURONEIS	--	-	--	-	--	-	29	1
...NITZSCHIACEAE								
....HANTZSCHIA	--	-	--	-	*	0	--	-
....NITZSCHIA	*	0	120	6	--	-	43	2
...SURIRELLACEAE								
....SURIRELLA	--	-	--	-	--	-	29	1
...TABELLARIACEAE								
....TABELLARIA	--	-	--	-	--	-	--	-
.CHRYSOPHYCEAE								
..CHRYSOMONADALES								
...OCHROMONADACEAE								
....PSEUDOKEPHYRION	*	0	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

14207500 TUALATIN RIVER AT WEST LINN, OR—Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO AUGUST 1978

DATE	JUN 19,78	JUL 14,78	AUG 1,78
TIME	1200	1400	1500
TOTAL CELLS/ML	130000	4900	6200
DIVERSITY: DIVISION	0.9	1.7	1.6
.CLASS	0.9	1.7	1.6
..ORDER	1.0	2.1	1.7
...FAMILY	1.1	2.5	2.5
....GENUS	1.2	3.2	3.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	--	-	--	-	--	-
...CHLOROCOCCACEAE						
....CHLOROCOCCUM	--	-	--	-	--	-
...HYDRODICTYACEAE						
....PEDIASTRUM	--	-	--	-	--	-
...MICRACTINIACEAE						
....GOLENKINIA	--	-	31	1	--	-
....MICRACTINIUM	--	-	62	1	920	15
...OOCYSTACEAE						
....ANKISTRODESMUS	2200	2	47	1	*	0
....CHLORELLA	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	47	1	--	-
....KIRCHNERIELLA	--	-	47	1	800	13
....OOCYSTIS	2200	2	120	3	--	-
....SELENASTRUM	--	-	62	1	57	1
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	120	3	--	-
....CRUCIGENIA	2900	2	310	6	550	9
....SCENEDESMUS	5100	4	400	8	1100#	18
....TETRASTRUM	--	-	--	-	110	2
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	360	7	--	-
...PHACOTACEAE						
....PTEROMONAS	--	-	*	0	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....COSMARIUM	*	0	--	-	--	-
..CHLOROCOCCALES						
...OOCYSTACEAE						
....POLYEDRIOPSIS	--	-	*	0	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	*	0	160	3	*	0
....MELOSIRA	12000	9	1700#	36	980#	16
....SKELETONEMA	--	-	--	-	--	-
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	31	1	--	-
....COCCONEIS	--	-	--	-	--	-
....RHOICOSPHENIA	--	-	*	0	*	0
...CYMBELLACEAE						
....CYMBELLA	--	-	--	-	--	-
...FRAGILARIACEAE						
....ASTERIONELLA	--	-	47	1	--	-
....FRAGILARIA	1100	1	--	-	--	-
....SYNEDRA	--	-	--	-	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	*	0	--	-	*	0
....NEIDIUM	--	-	--	-	--	-
....PINNULARIA	--	-	--	-	--	-
....STAURONEIS	--	-	--	-	--	-
...NITZSCHIACEAE						
....HANTZSCHIA	--	-	--	-	--	-
....NITZSCHIA	--	-	31	1	--	-
...SURIRELLACEAE						
....SURIRELLA	--	-	--	-	--	-
...TABELLARIACEAE						
....TABELLARIA	730	1	--	-	--	-
.CHRYSOPHYCEAE						
..CHRYSOMONADALES						
...OCHROMONADACEAE						
....PSEUDOKEPHYRION	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

14207500 TUALATIN RIVER AT WEST LINN, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO AUGUST 1978

DATE TIME	OCT 5,77 0815		DEC 2,77 1200		MAR 17,78 1420		MAY 16,78 1100	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROCCOCCALES								
...CHROCCOCCAEAE								
....ANACYSTIS	--	-	--	-	2000#	51	57	3
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	570	10	--	-	--	-	--	-
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	520	13	--	-
..CHROCCOCCALES								
...CHROCCOCCAEAE								
....GOMPHOSPHAERIA	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	*	0	--	-	*	0	--	-
....LEPOCINCLIS	--	-	--	-	--	-	--	-
....TRACHELOMONAS	*	0	--	-	25	1	14	1
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..GYMNODINIALES								
...GYMNODINIACEAE								
....GYMNODINIUM	--	-	--	-	--	-	--	-

DATE TIME	JUN 19,78 1200		JUL 14,78 1400		AUG 1,78 1500	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROCCOCCALES						
...CHROCCOCCAEAE						
....ANACYSTIS	110000#	80	62	1	340	6
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	--	-	--	-
...OSCILLATORIACEAE						
....LYNGBYA	--	-	--	-	--	-
..CHROCCOCCALES						
...CHROCCOCCAEAE						
....GOMPHOSPHAERIA	--	-	1000#	21	--	-
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	47	1	--	-
....LEPOCINCLIS	--	-	--	-	*	0
....TRACHELOMONAS	--	-	*	0	1200#	19
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..GYMNODINIALES						
...GYMNODINIACEAE						
....GYMNODINIUM	--	-	93	2	*	0

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
OCT 05...	--	--	--	.000	1.28
DEC 02...	31	.079	.157	.000	.000
MAY 16...	29	3.70	4.72	10.7	2.18
JUL 18...	38	3.46	4.33	10.9	2.60

14207500 TUALATIN RIVER AT WEST LINN, OR—Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	---	---	103	118	124	91	168	193	
2			96	---	---	105	119	125	92	171	192	
3			95	---	---	108	119	127	94	171	191	
4			96	---	---	108	117	129	99	173	192	
5			92	---	---	108	117	131	105	166	190	
6			82	---	---	109	118	133	110	159	193	
7			84	---	---	115	116	133	118	158	197	
8			88	---	---	118	115	132	127	162	199	
9			89	---	---	118	115	132	135	166	199	
10			87	91	---	114	112	133	141	170	196	
11			88	91	---	111	111	135	149	176	194	
12			92	88	---	105	112	137	149	185	190	
13			86	88	---	104	115	138	152	207	186	
14			81	88	---	106	117	135	155	185	186	
15			82	89	---	108	119	123	157	183	---	
16			69	90	---	111	121	110	---	184	---	
17			65	90	97	115	122	100	---	---	---	
18			68	92	99	117	121	92	---	180	---	
19			79	92	105	112	121	88	155	164	---	
20			86	91	114	109	122	89	154	161	---	
21			83	92	119	113	123	93	150	163	---	
22			78	92	115	117	121	96	145	166	---	
23			79	93	111	122	120	99	147	169	---	
24			80	---	126	128	119	101	159	177	---	
25			85	---	129	132	124	99	165	179	---	
26			88	---	123	134	126	97	161	190	---	
27			92	---	112	135	125	95	160	182	---	
28			93	---	105	124	126	95	160	182	---	
29			---	---	---	112	126	97	162	205	---	
30			---	---	---	114	125	101	165	206	---	
31			---	---	---	117	---	97	---	194	---	

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.0	14.5	11.5	11.0	8.5	8.5	5.0	4.5	7.0	6.5	9.0	8.5
2	14.5	14.0	11.0	10.5	9.0	8.5	4.5	4.5	7.0	7.0	8.5	8.0
3	14.0	13.5	10.5	9.5	9.0	9.0	4.5	4.0	7.5	7.0	8.0	7.5
4	14.0	13.5	9.5	9.0	9.5	9.0	4.0	3.5	8.0	7.5	7.5	7.0
5	14.0	14.0	9.5	9.0	9.5	9.0	4.0	3.5	8.5	8.0	7.0	7.0
6	14.0	13.5	9.0	8.5	9.0	8.5	5.0	4.0	8.5	8.5	7.5	7.0
7	14.0	13.5	9.0	8.5	8.5	8.0	6.0	5.0	8.5	8.5	7.5	7.0
8	14.0	13.5	8.5	7.5	8.0	7.5	6.5	6.0	8.5	8.5	8.0	7.5
9	14.0	13.5	8.0	7.5	7.5	7.0	6.5	6.5	8.5	8.5	8.5	8.0
10	14.0	13.5	8.5	8.0	7.0	6.5	6.5	6.5	8.5	8.0	9.0	8.5
11	13.5	13.5	8.5	8.0	7.5	6.5	7.0	6.5	8.0	7.5	9.0	9.0
12	13.5	13.5	8.5	8.5	8.0	7.5	7.0	7.0	7.0	6.5	9.5	9.0
13	14.0	13.5	8.5	8.5	9.5	8.0	7.0	7.0	6.5	6.0	9.5	9.0
14	13.5	13.5	9.0	8.5	10.0	9.5	7.0	7.0	6.0	6.0	9.0	8.5
15	13.5	13.5	9.0	8.5	10.0	9.5	7.0	7.0	6.0	6.0	9.0	8.5
16	14.0	13.5	9.0	8.5	9.5	8.5	7.0	7.0	6.5	6.0	9.0	8.5
17	13.5	13.0	9.0	8.5	8.5	8.5	7.5	7.0	6.5	6.0	9.0	8.5
18	13.5	13.0	8.5	8.0	8.5	7.5	7.5	7.5	7.0	6.5	9.0	8.5
19	13.5	13.0	8.0	7.0	7.5	7.0	7.5	7.5	7.5	7.0	9.5	9.0
20	13.0	12.5	7.0	6.0	7.0	6.0	8.0	7.5	8.5	7.5	10.0	9.0
21	13.0	12.5	6.0	4.5	6.0	6.0	8.0	8.0	9.0	8.5	10.5	10.0
22	13.0	12.5	4.5	4.0	6.0	5.5	8.0	8.0	9.5	9.0	11.5	10.5
23	13.0	12.5	4.0	4.0	5.5	5.5	8.0	8.0	9.5	9.5	11.5	11.0
24	13.0	13.0	4.0	4.0	5.5	5.5	8.0	7.0	9.5	9.5	11.5	11.5
25	13.0	12.5	6.0	4.0	6.0	5.5	7.0	6.5	9.5	9.5	12.0	11.5
26	13.0	12.5	6.5	6.0	6.0	6.0	6.5	6.0	9.5	9.5	12.0	11.5
27	12.5	12.5	8.0	6.5	6.0	5.5	6.0	6.0	9.5	9.0	12.0	11.5
28	12.5	12.0	8.5	8.0	5.5	5.5	6.0	6.0	9.0	9.0	12.0	11.5
29	12.0	12.0	8.5	8.5	5.5	5.0	6.5	6.0	---	---	12.0	11.5
30	12.0	11.5	8.5	8.5	5.0	5.0	6.5	6.0	---	---	12.5	12.0
31	11.5	11.5	---	---	5.0	5.0	6.5	6.5	---	---	12.5	12.0
MONTH	15.0	11.5	11.5	4.0	10.0	5.0	8.0	3.5	9.5	6.0	12.5	7.0

14207300 TUALATIN RIVER AT WEST LINN, OR—Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.0	11.5	12.5	12.0	16.0	14.0	21.0	20.5	23.0	22.0	20.0	18.5
2	11.5	11.0	12.5	12.5	17.0	15.0	20.5	19.5	23.0	21.5	20.0	19.5
3	12.0	11.0	12.5	12.5	17.5	15.5	19.5	19.0	24.0	22.0	20.0	19.0
4	11.5	11.0	13.0	12.5	18.5	16.5	19.0	19.0	23.5	22.5	19.0	18.5
5	11.0	11.0	12.5	12.5	19.0	17.5	19.5	18.5	24.0	22.0	19.0	18.5
6	11.0	10.5	13.0	12.0	20.0	18.5	20.0	19.0	24.0	22.5	18.5	18.0
7	11.0	10.5	13.5	12.5	20.0	19.0	20.5	19.5	24.5	23.0	18.5	18.0
8	11.0	10.5	14.0	13.0	20.5	19.0	21.0	20.0	25.0	23.5	18.0	17.5
9	11.0	10.5	13.5	13.0	20.5	19.5	20.0	19.5	25.5	23.5	17.5	17.0
10	11.0	10.5	13.0	12.5	20.0	19.5	19.5	19.5	24.5	23.5	17.0	16.5
11	11.5	11.0	13.5	12.5	20.5	19.0	20.0	19.5	24.0	23.0	17.5	16.5
12	11.5	11.0	13.5	13.0	20.0	19.5	21.0	19.0	23.0	22.5	17.0	16.0
13	11.5	11.0	13.5	13.0	20.0	19.5	21.5	19.5	22.5	22.0	15.5	14.5
14	11.5	11.0	13.0	12.0	19.5	19.0	22.5	20.5	22.5	21.5	15.0	14.5
15	11.5	11.5	12.0	11.5	19.0	16.5	22.0	21.0	22.0	21.5	15.5	15.0
16	11.0	10.5	12.0	11.5	18.5	18.0	21.0	20.5	21.5	21.0	15.5	14.5
17	10.5	10.5	11.5	11.0	19.0	17.5	20.5	20.0	21.0	20.5	15.0	14.5
18	11.0	10.5	12.0	11.0	19.0	16.0	20.0	19.0	20.5	20.0	15.0	14.0
19	11.0	10.5	13.0	11.5	19.5	18.0	20.5	19.0	20.5	20.0	15.0	14.0
20	11.0	10.5	14.0	12.5	20.5	18.5	21.5	20.0	20.5	20.0	15.0	14.0
21	10.5	10.5	14.0	14.0	20.0	18.5	22.5	21.0	20.0	20.0	15.0	14.0
22	10.5	10.5	14.5	13.5	18.5	18.5	23.0	21.5	20.0	19.5	14.5	14.5
23	10.5	10.0	14.5	14.0	18.5	18.5	23.5	22.0	19.5	18.5	14.5	14.0
24	10.5	10.0	14.5	14.0	18.5	18.0	24.0	22.5	19.0	18.5	15.0	14.0
25	10.5	10.0	14.0	13.5	18.5	18.0	23.5	22.0	18.5	18.0	15.0	14.5
26	10.5	10.0	13.5	13.0	19.5	18.0	23.5	22.5	19.0	17.5	15.5	14.5
27	11.5	10.5	13.0	12.5	20.0	18.5	22.5	22.0	18.5	17.5	15.5	15.0
28	12.0	11.5	13.0	12.5	20.5	19.5	22.5	21.5	19.0	17.5	15.5	15.0
29	12.0	11.5	13.0	12.5	20.5	20.0	23.5	21.5	19.0	18.0	15.5	15.0
30	12.0	11.5	14.0	12.5	21.0	20.0	23.5	22.0	19.0	18.5	15.5	15.5
31	---	---	14.5	13.5	---	---	23.5	21.5	19.0	18.5	---	---
MONTH	12.0	10.0	14.5	11.0	21.0	14.0	24.0	18.5	25.5	17.5	20.0	14.0

14207740 WILLAMETTE RIVER ABOVE FALLS, AT OREGON CITY, OR

LOCATION.—Lat 45°20'55", long 122°37'08", in SW¼SW¼ sec.31, T.2 S., R.2 E., Clackamas County, Hydrologic Unit 17090007, on right bank 0.2 mi (0.3 km) above Willamette Falls, 0.6 mi (1.0 km) downstream from Tualatin River, and at mile 26.8 (43.1 km).

DRAINAGE AREA.—10,000 mi^2 (25,900 km^2), approximately.

PERIOD OF RECORD.—October 1976 to current year.

GAGE.—Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.—Flow regulated by many reservoirs upstream.

EXTREMES FOR CURRENT YEAR.—Maximum gage height, 64.79 ft (19.748 m) Dec. 17; minimum, 53.20 ft (16.215 m) July 26.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55.88	56.63	60.07	58.13	55.91	---	54.65	55.60	54.13	54.74	54.29	55.11
2	55.86	57.00	59.97	57.80	56.45	---	54.03	55.33	53.99	54.71	54.22	55.13
3	55.73	57.39	60.74	57.56	57.39	---	54.10	55.08	53.89	54.68	54.17	55.20
4	55.54	57.30	61.04	57.97	57.87	---	54.24	54.87	53.80	54.83	54.29	55.20
5	55.39	57.04	60.91	58.61	58.14	---	54.31	54.72	53.70	54.85	54.37	55.21
6	55.29	56.93	60.68	59.31	57.92	---	54.60	54.61	53.66	54.71	54.46	55.31
7	55.40	56.84	60.53	60.30	57.81	---	54.76	54.49	53.60	54.51	54.52	55.45
8	55.72	56.69	60.40	60.40	58.07	54.53	54.70	54.37	53.57	54.06	54.47	55.55
9	55.83	56.59	60.25	60.01	58.22	54.63	54.50	54.26	53.50	53.81	54.40	55.67
10	55.79	56.48	60.05	59.53	57.93	54.76	54.36	54.20	53.50	53.88	54.32	55.80
11	55.73	56.34	60.19	58.97	57.57	54.66	54.23	54.20	53.59	53.92	54.28	56.16
12	55.71	56.21	60.74	58.49	57.13	54.60	54.14	54.27	53.72	54.06	54.48	56.37
13	55.70	56.25	61.67	58.27	56.77	54.58	54.08	54.57	53.69	54.42	54.77	56.42
14	55.65	56.44	62.80	58.32	56.51	54.57	54.04	55.15	53.64	54.50	54.83	56.40
15	55.57	57.00	63.81	58.33	56.17	54.87	54.07	56.33	54.24	54.42	54.89	56.31
16	55.49	57.84	64.58	58.17	55.91	55.05	54.16	56.81	55.39	54.52	54.94	56.21
17	55.33	57.89	64.69	58.26	55.77	55.00	54.24	56.63	55.42	54.64	54.98	56.14
18	55.13	57.66	64.20	58.38	55.63	54.95	54.32	56.21	55.35	54.72	55.09	56.11
19	55.23	57.28	63.39	58.55	55.47	54.90	54.50	55.79	55.32	54.68	55.09	56.12
20	55.41	57.02	62.44	58.57	55.35	54.85	54.72	55.44	55.25	54.48	55.03	56.09
21	55.37	56.80	61.64	58.34	55.21	54.80	54.79	55.10	55.17	54.25	55.07	56.11
22	55.08	56.68	61.09	58.34	55.16	54.77	55.00	54.85	55.09	54.05	55.16	56.04
23	54.90	56.97	60.67	58.44	55.03	54.75	55.76	54.68	55.04	53.73	55.23	56.04
24	54.84	58.21	60.29	58.25	54.96	54.80	56.24	54.58	54.95	53.45	55.25	56.01
25	54.94	59.64	60.16	57.88	55.03	55.02	55.96	54.50	54.91	53.45	55.26	55.93
26	55.31	60.97	60.20	57.53	55.21	55.10	55.86	54.47	54.91	53.43	---	55.93
27	55.67	61.48	60.06	57.19	---	55.00	56.55	54.41	54.92	54.08	---	55.92
28	55.71	61.28	59.56	56.83	---	54.90	56.85	54.43	54.94	54.47	---	55.91
29	55.69	60.60	58.86	56.53	---	54.50	56.40	54.50	54.84	54.35	---	55.90
30	55.85	60.22	58.49	56.20	---	54.15	55.92	54.43	54.78	54.22	---	55.87
31	56.22	---	58.28	55.99	---	54.09	---	54.29	---	54.24	---	---
MEAN	55.51	57.72	61.05	58.24	---	---	54.85	54.94	54.42	54.29	---	55.85

14207770 WILLAMETTE RIVER BELOW FALLS, AT OREGON CITY, OR

LOCATION.--Lat 45°21'28", long 122°36'35", in NE¼NW¼ sec.31, T.2 S., R.2 E., Clackamas County, Hydrologic Unit 17090007, on right bank 0.5 mi (0.8 km) below Willamette Falls, 1.4 mi (2.2 km) upstream from Clackamas River, and at mile 26.2 (42.2 km).

DRAINAGE AREA.--10,000 mi^2 (25,900 km^2), approximately.

PERIOD OF RECORD.--November 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Oregon State Highway Division bench mark).

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height recorded, 32.03 ft (9.763 m) Dec. 17, 1977; minimum, 1.86 ft (0.567 m) July 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 32.03 ft (9.763 m) Dec. 17; minimum recorded, 2.90 ft (0.884 m) Aug. 6.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.82	5.81	6.56	---	---	---	---	---	---	14.29	13.51	13.90
2	7.00	5.21	5.99	---	---	---	---	---	---	13.51	12.52	12.97
3	6.80	4.93	5.62	---	---	---	---	---	---	12.78	12.17	12.47
4	6.23	4.79	5.42	---	---	---	---	---	---	14.87	12.64	13.88
5	6.11	4.23	4.96	---	---	---	---	---	---	16.24	14.92	15.61
6	6.05	4.25	5.09	---	---	---	---	---	---	18.66	16.08	17.49
7	6.40	4.75	5.60	---	---	---	---	---	---	20.24	18.69	19.61
8	6.69	5.02	5.81	---	---	---	---	---	---	20.18	19.67	19.97
9	6.82	5.00	5.80	---	---	---	---	---	---	19.59	18.63	19.12
10	6.80	4.79	5.70	---	---	---	---	---	---	18.57	17.67	18.11
11	7.12	4.82	5.79	9.19	---	---	---	---	---	17.79	16.62	17.10
12	7.51	4.86	5.95	8.90	6.32	7.37	---	---	---	16.53	15.72	16.05
13	8.00	5.08	6.33	8.98	6.39	7.47	---	---	---	15.90	15.28	15.56
14	7.74	5.17	6.25	9.78	6.65	8.03	---	---	---	15.78	15.24	15.48
15	7.46	4.73	5.88	10.32	8.33	9.53	31.75	30.45	31.04	15.67	14.88	15.31
16	7.16	4.63	5.67	10.38	9.68	9.93	31.97	31.65	31.82	15.06	14.48	14.82
17	7.12	4.39	5.48	10.72	9.60	9.77	32.03	30.86	31.48	15.44	14.98	15.20
18	7.13	4.37	5.48	10.45	9.54	9.65	30.81	28.62	29.77	15.78	15.21	15.51
19	6.71	4.41	5.38	11.49	10.12	10.82	28.63	26.23	27.39	16.50	15.77	16.17
20	6.44	4.28	5.33	10.29	9.22	9.80	26.16	23.83	24.95	16.24	15.39	15.98
21	6.37	4.12	5.10	9.83	9.03	9.45	23.78	21.99	22.85	15.43	14.95	15.20
22	6.27	3.78	4.89	10.22	9.23	9.68	21.93	20.84	21.38	15.51	14.92	15.20
23	6.53	3.79	5.05	11.44	9.54	10.14	20.78	19.80	20.33	15.68	15.07	15.35
24	7.03	3.76	5.31	---	---	---	19.76	18.92	19.33	15.46	14.73	15.16
25	7.23	4.07	5.59	---	---	---	19.04	18.72	18.87	14.69	13.83	14.22
26	7.64	4.52	5.92	---	---	---	19.01	18.66	18.80	13.76	13.33	13.52
27	8.34	5.26	6.58	---	---	---	18.73	18.16	18.45	12.97	12.22	12.59
28	8.49	5.92	6.97	---	---	---	18.05	16.62	17.45	12.42	11.50	11.96
29	8.13	5.79	6.69	---	---	---	16.53	15.43	15.85	11.68	10.63	11.18
30	8.25	5.70	6.88	---	---	---	15.51	14.86	15.12	10.81	10.03	10.35
31	8.49	6.46	7.40	---	---	---	14.95	14.14	14.43	10.63	9.70	10.09
MONTH	8.49	3.76	5.82	11.49	6.32	9.30	32.03	14.14	22.31	20.24	9.70	15.00

14207770 WILLAMETTE RIVER BELOW FALLS, AT OREGON CITY, OR--Continued

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	10.45	9.59	9.96	---	---	---	9.39	8.08	8.89	11.46	10.51	11.04
2	12.16	10.36	11.24	---	---	---	8.99	7.76	8.49	11.05	9.99	10.57
3	13.87	12.28	13.28	---	---	---	10.37	8.69	9.69	10.71	9.99	10.53
4	14.63	13.68	14.13	---	---	---	10.63	9.58	10.15	10.90	10.13	10.59
5	15.28	14.40	14.77	---	---	---	10.38	9.22	9.89	10.85	10.06	10.54
6	14.87	13.97	14.39	---	---	---	10.74	9.53	10.23	11.07	10.18	10.74
7	15.28	13.87	14.45	---	---	---	11.07	9.92	10.44	10.76	9.37	10.04
8	15.98	14.88	15.33	---	---	---	10.28	8.84	9.53	10.13	9.04	9.71
9	16.13	15.48	15.79	---	---	---	9.65	8.26	8.87	10.56	9.30	9.85
10	15.77	14.67	15.17	9.61	7.83	8.62	9.63	8.16	8.82	9.68	8.63	9.23
11	14.83	13.58	14.15	9.35	7.43	8.23	9.75	8.63	9.14	9.90	8.90	9.38
12	13.67	12.31	12.97	9.05	6.81	7.72	9.11	8.19	8.69	9.79	9.10	9.42
13	12.33	11.21	11.68	9.17	6.64	7.51	8.99	8.29	8.61	10.17	9.56	9.82
14	11.35	10.47	10.90	8.27	6.36	7.13	9.19	8.31	8.75	11.18	10.04	10.34
15	10.74	9.83	10.35	7.87	6.46	7.06	9.24	8.24	8.79	13.22	11.28	12.23
16	10.22	9.52	9.88	7.66	6.06	6.94	8.79	7.48	8.42	13.64	13.34	13.54
17	10.02	9.10	9.64	7.19	5.81	6.50	7.91	7.02	7.46	13.60	12.84	13.29
18	---	---	---	7.09	5.54	6.42	8.51	7.66	8.16	13.06	12.20	12.71
19	---	---	---	6.78	5.17	6.05	8.94	7.82	8.51	12.66	12.08	12.41
20	---	---	---	7.14	5.29	6.19	9.96	8.26	9.37	12.29	10.03	11.32
21	---	---	---	7.68	5.75	6.69	10.40	9.24	9.85	10.87	9.19	9.96
22	---	---	---	8.04	5.91	6.95	10.72	9.13	9.86	11.78	9.26	9.72
23	---	---	---	8.80	6.14	7.59	10.99	9.23	10.41	11.14	9.72	10.55
24	---	---	---	9.22	7.35	8.38	11.76	10.45	11.13	11.85	10.54	11.25
25	---	---	---	9.76	8.19	8.96	11.91	10.46	11.09	12.05	11.15	11.55
26	---	---	---	9.75	8.08	8.80	11.75	10.41	11.38	---	---	---
27	---	---	---	9.70	7.76	8.57	13.11	11.55	12.29	---	---	---
28	---	---	---	9.65	7.93	8.61	13.38	12.72	13.08	---	---	---
29	---	---	---	9.79	7.97	8.71	12.91	11.70	12.35	9.60	7.98	8.78
30	---	---	---	9.52	8.31	8.80	11.89	10.93	11.38	9.14	8.54	8.90
31	---	---	---	9.43	8.34	8.92	---	---	---	9.82	8.14	8.94
MONTH	16.13	9.10	12.83	9.79	5.17	7.78	13.38	7.02	9.79	13.64	7.98	10.61

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9.40	8.42	8.75	8.79	6.55	7.57	7.00	---	---	7.80	5.40	6.19
2	9.90	8.56	9.04	8.42	---	---	7.52	---	---	7.62	4.30	5.71
3	9.65	7.24	8.22	8.08	---	---	---	---	---	6.50	3.40	4.75
4	8.68	6.68	7.52	7.96	---	---	---	---	---	6.80	3.72	5.09
5	9.08	7.10	7.81	---	---	---	---	---	---	7.10	3.78	5.16
6	9.36	7.74	8.36	---	---	---	6.02	2.90	4.45	7.90	4.50	5.85
7	8.96	7.66	8.24	---	---	---	6.10	3.00	4.40	8.52	5.80	6.83
8	9.36	8.00	8.54	7.81	5.71	6.77	7.09	3.65	5.04	8.46	6.63	7.29
9	---	---	---	6.89	4.97	5.87	6.80	3.80	5.09	8.61	6.70	---
10	---	---	---	7.99	5.93	6.87	6.72	3.70	4.88	8.33	6.20	6.98
11	---	---	---	---	---	---	6.90	3.64	4.68	8.10	6.40	---
12	---	---	---	8.35	6.65	7.15	6.90	3.24	---	8.63	7.00	---
13	---	---	---	8.35	6.82	7.51	6.21	---	---	8.80	7.00	---
14	---	---	---	8.32	6.88	7.51	---	---	---	9.32	7.40	8.39
15	---	---	---	8.50	5.92	7.11	---	---	---	9.80	7.91	---
16	---	---	---	7.78	4.86	6.14	---	---	---	---	---	---
17	---	---	---	7.80	4.84	6.08	---	---	---	8.70	6.40	7.55
18	---	---	---	8.73	5.91	7.15	---	---	---	8.90	6.60	7.77
19	---	---	---	9.03	---	---	---	---	---	9.17	6.40	7.54
20	---	---	---	8.97	5.77	---	---	---	---	8.90	7.31	7.98
21	---	---	---	---	---	---	---	---	---	8.60	6.90	7.67
22	---	---	---	---	---	---	---	---	---	8.01	6.50	7.11
23	---	---	---	---	---	---	---	---	---	7.90	5.80	6.88
24	---	7.10	---	---	---	---	---	---	---	7.36	5.41	6.34
25	---	---	---	8.12	---	---	---	---	---	6.71	5.40	---
26	---	---	---	7.75	5.32	6.32	---	---	---	7.10	6.00	6.69
27	8.76	6.76	---	7.80	4.80	---	---	---	---	7.10	5.60	6.82
28	8.65	7.07	---	---	---	---	---	---	---	7.18	5.80	6.95
29	8.89	---	---	6.86	---	---	---	---	---	7.00	5.00	6.26
30	8.59	---	---	---	---	---	7.34	4.80	---	7.80	5.40	7.31
31	---	---	---	---	---	---	7.13	4.60	5.44	---	---	---
MONTH	9.90	6.68	8.31	9.03	4.80	6.84	7.52	2.90	4.85	9.80	3.40	6.74
YEAR	32.03	2.90	10.30									

14208600 TIMOTHY LAKE NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°06'50", long 121°48'35", in NE¼ sec.27, T.5 S., R.8 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, in intake structure 350 ft (107 m) upstream from dam on Oak Grove Fork, 0.4 mi (0.6 km) upstream from Anvil Creek, 14 mi (22.5 km) south of Government Camp, and at mile 15.8 (25.4 km).

DRAINAGE AREA.--53.8 mi^2 (139.3 km^2).

PERIOD OF RECORD.--May 1956 to current year. Prior to October 1957, published as Timothy Meadows Reservoir.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Portland General Electric Co.).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway built by Portland General Electric Co. Usable storage began May 28, 1956. Capacity, 65,710 acre-ft (81.0 hm^3) at elevation 3,190 ft (972.3 m), normal maximum operating level. Usable capacity increased in 1966 water year to 64,450 acre-ft (79.5 hm^3) between elevations 3,125.0 ft (952.50 m), invert of outlet pipe, and 3,192.0 ft (972.92 m), top of radial gates. Storage of 4,060 acre-ft (5.0 hm^3) below elevation 3,125.0 ft (952.50 m) not normally available for release. Water is used for power generation. Figures given herein represent total contents.

COOPERATION.--Elevations and capacity table furnished by Portland General Electric Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 68,800 acre-ft (84.8 hm^3) Oct. 3, 1967, elevation, 3,192.2 ft (972.98 m); minimum observed, 16,010 acre-ft (19.7 hm^3) Feb. 24, 1957, elevation, 3,144.5 ft (958.44 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 67,990 acre-ft (83.8 hm^3) Aug. 1, 2, elevation, 3,191.63 ft (972.809 m); minimum observed, 42,040 acre-ft (51.8 hm^3) Nov. 24, elevation, 3,171.15 ft (966.567 m).

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	3,183.36	56,910	-
Oct. 31	3,175.33	46,970	-9,940
Nov. 30	3,173.49	44,780	-2,190
Dec. 31	3,189.03	64,380	+19,600
CAL YR 1977	-	-	+21,750
Jan. 31	3,186.17	60,560	-3,820
Feb. 28	3,183.95	57,670	-2,890
Mar. 31	3,181.50	54,550	-3,120
Apr. 30	3,186.25	60,670	+6,120
May 31	3,189.48	65,000	+4,330
June 30	3,190.94	67,020	+2,020
July 31	3,191.62	67,970	+950
Aug. 31	3,188.28	63,370	-4,600
Sept. 30	3,189.02	64,370	+1,000
WTR YR 1978	-	-	+7,460

14208700 OAK GROVE FORK NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°06'50", long 121°48'50", in NE¼ sec.27, T.5 S., R.8 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.1 mi (0.2 km) upstream from Anvil Creek, 0.3 mi (0.5 km) downstream from Timothy Lake, 14 mi (23 km) south of Government Camp, and at mile 15.5 (24.9 km).

DRAINAGE AREA.--54.4 mi^2 (140.9 km^2).

PERIOD OF RECORD.--July 1956 to current year.

GAGE.--Water-stage recorder and artificial control. Datum of gage is 3,041.83 ft (927.150 m) National Geodetic Vertical Datum of 1929 (Portland General Electric Co. bench mark).

REMARKS.--Records fair. Flow regulated since 1956 by Timothy Lake (see station (14208600). No diversion above station.

AVERAGE DISCHARGE.--22 years, 131 ft^3/s (3.710 m^3/s), 32.70 in/yr (831 mm/yr), 94,910 acre-ft/yr (117 hm^3/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,110 ft^3/s (59.8 m^3/s) Dec. 24, 1964, gage height, 3.93 ft (1.198 m), from rating curve extended above 290 ft^3/s (8.21 m^3/s) on basis of slope-area measurement of peak flow; minimum, 3.7 ft^3/s (0.10 m^3/s) Sept. 23, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 352 ft^3/s (9.97 m^3/s) Jan. 24, 25, gage height, 2.62 ft (0.799 m); minimum, 26 ft^3/s (0.74 m^3/s) many days May to September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	222	158	50	233	218	244	40	35	35	39	34	40
2	204	127	60	233	183	248	40	35	35	39	70	39
3	225	193	52	229	144	248	40	35	35	39	158	38
4	229	214	48	214	164	252	40	35	35	39	138	38
5	218	183	47	200	164	256	40	35	35	39	138	39
6	207	193	48	180	144	256	40	35	35	38	48	65
7	197	211	48	214	122	252	40	35	35	38	117	39
8	193	183	48	200	127	244	40	35	35	38	161	37
9	197	204	65	187	138	252	40	34	35	38	158	37
10	138	204	48	197	164	260	40	35	40	38	155	38
11	135	207	50	204	180	260	40	35	40	37	158	38
12	229	225	48	193	193	260	40	35	40	34	125	38
13	269	190	69	190	204	260	40	35	40	37	147	37
14	240	177	62	193	211	269	40	35	40	37	141	37
15	237	117	56	204	218	273	40	35	40	35	138	38
16	237	58	50	200	225	278	40	35	40	35	127	37
17	237	58	47	193	233	269	40	35	40	35	135	37
18	229	152	47	193	237	265	40	35	40	37	138	37
19	240	291	47	200	237	265	39	35	38	35	130	37
20	248	314	47	200	237	256	38	35	38	35	105	37
21	248	314	47	180	240	130	35	35	38	35	97	38
22	233	305	47	193	244	47	35	35	38	37	100	38
23	233	218	120	214	244	43	35	35	38	35	120	38
24	233	207	256	282	237	41	35	35	38	35	120	37
25	218	67	248	291	237	40	35	35	38	34	150	35
26	214	60	229	214	218	40	35	35	37	35	167	35
27	256	55	74	222	233	40	35	35	37	35	167	35
28	233	55	158	222	240	40	35	35	38	35	167	35
29	229	58	207	225	---	40	35	35	39	35	110	35
30	155	52	197	233	---	40	35	35	39	35	32	35
31	190	---	218	233	---	40	---	35	---	35	34	---
TOTAL	6773	5050	2838	6566	5636	5708	1147	1084	1131	1128	3785	1144
MEAN	218	168	91.5	212	201	184	38.2	35.0	37.7	36.4	122	38.1
MAX	269	314	256	291	244	278	40	35	40	39	167	65
MIN	135	52	47	180	122	40	35	34	35	34	32	35
AC-FT	13430	10020	5630	13020	11160	11320	2280	2150	2240	2240	7510	2270
MEAN†	56.8	132	410	150	149	133	141	105	71.6	51.9	47.3	55.0
CFSM†	1.04	2.43	7.54	2.75	2.74	2.45	2.59	1.94	1.32	.95	.87	1.01
IN.†	1.20	2.70	8.70	3.17	2.86	2.83	2.90	2.23	1.47	1.10	1.00	1.13
AC-FT†	3,490	7,830	25,230	9,200	8,290	8,200	8,400	6,480	4,260	3,190	2,910	3,270

CAL YR 1977 TOTAL 28,158 MEAN 77.1 MAX 390 MIN 29 AC-FT 55,850 MEAN† 107 CFSM† 1.97 IN.† 26.75 AC-FT† 77,600
WTR YR 1978 TOTAL 41,990 MEAN 115 MAX 314 MIN 32 AC-FT 83,290 MEAN† 125 CFSM† 2.30 IN.† 31.29 AC-FT† 90,750

† Adjusted for change in contents in Timothy Lake.

14209000 OAK GROVE FORK ABOVE POWERPLANT INTAKE, OR

LOCATION.--Lat 45°04'20", long 121°57'00", on line between secs.3 and 4, T.6 S., R.7 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.2 mi (0.3 km) upstream from Spring Creek, 0.7 mi (1.1 km) upstream from Kink Creek, 1.0 mi (1.6 km) upstream from Portland General Electric Co. diversion dam, 24 mi (39 km) southeast of Estacada, and at mile 6.1 (9.8 km).

DRAINAGE AREA.--126 mi² (326 km²).

PERIOD OF RECORD.--May 1909 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as both Oak Grove Fork of Clackamas River at proposed intake, near Cazadero, and Oak Grove Fork of Clackamas River at intake, near Cazadero, May 1909 to September 1910, as Oak Grove Fork of Clackamas River at intake, near Cazadero, October 1910 to September 1921, and as Oak Grove Fork at Portland General Electric Power Co. intake, October 1921 to September 1929.

REVISED RECORDS.--WSP 1248: 1909, 1910(M), 1916, 1918, 1923, 1932. WSP 1935: 1914, 1921.

GAGE.--Water-stage recorder. Datum of gage is 2,052.31 ft (625.544 m) National Geodetic Vertical Datum of 1929. May 21, 1909, to Nov. 17, 1911, nonrecording gage and Mar. 26, 1912, to Sept. 30, 1923, water-stage recorder, at various sites 0.7 mi (1.1 km) downstream, below Kink Creek, at different datum.

REMARKS.--Records good. Flow regulated since 1956 by Timothy Lake (see station 14208600). No diversion above station.

AVERAGE DISCHARGE.--69 years, 503 ft³/s (14.24 m³/s), 364,400 acre-ft/yr (449 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s (142 m³/s) Jan. 7, 1923, gage height, 5.45 ft (1.661 m), site and datum then in use, from rating curve extended above 2,300 ft³/s (65.1 m³/s) on basis of peak discharge for other stations in Clackamas River basin; minimum, 215 ft³/s (6.09 m³/s) July 24, 28, 29, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,410 ft³/s (68.3 m³/s) Dec. 13, gage height, 4.56 ft (1.390 m); minimum, 215 ft³/s (6.09 m³/s) July 24, 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	458	432	640	506	578	553	347	300	274	260	227	248
2	432	452	1040	506	621	553	338	287	269	252	240	248
3	442	432	1040	512	596	547	333	278	274	248	381	252
4	442	468	869	512	565	547	328	278	278	244	357	252
5	432	416	711	553	565	541	328	287	274	248	357	256
6	432	411	799	578	559	535	314	282	269	256	282	282
7	437	463	805	578	584	535	309	274	260	252	296	265
8	427	401	672	578	590	547	309	269	260	248	372	260
9	422	416	627	571	578	530	305	274	256	252	367	260
10	372	411	647	565	578	535	300	287	282	240	352	274
11	333	406	967	559	571	535	300	296	282	240	362	291
12	422	427	992	565	565	530	296	287	278	244	333	269
13	479	416	1850	547	559	535	291	309	274	244	376	260
14	432	506	1880	535	553	518	291	352	274	244	362	252
15	422	565	1700	535	553	524	296	347	278	252	367	252
16	422	422	1260	541	559	524	296	338	274	260	357	248
17	422	367	1050	547	559	524	296	319	274	252	352	260
18	422	411	876	547	541	524	296	305	260	240	357	269
19	422	553	744	547	535	530	296	296	252	244	357	256
20	427	571	647	541	524	512	296	291	252	236	362	252
21	422	565	578	547	530	463	291	287	244	231	342	252
22	416	553	524	553	530	352	324	291	252	236	357	252
23	416	512	518	541	530	381	314	287	252	231	357	248
24	416	571	653	571	559	391	300	282	256	227	367	244
25	447	1110	666	640	553	381	296	287	256	227	381	244
26	416	1090	596	547	553	376	342	287	265	227	357	244
27	447	785	468	547	559	372	347	282	252	227	367	244
28	416	666	468	541	553	367	324	274	256	223	338	248
29	437	855	553	535	---	367	314	269	265	231	342	244
30	442	705	512	535	---	362	305	274	260	227	260	244
31	463	---	518	535	---	352	---	274	---	227	252	---
TOTAL	13237	16358	25870	17015	15700	14843	9322	9850	7952	7470	10536	7670
MEAN	427	545	835	549	561	479	311	292	265	241	340	256
MAX	479	1110	1880	640	621	553	347	352	282	260	381	291
MIN	333	367	468	506	524	352	291	269	244	223	227	244
AC-FT	26260	32450	51310	33750	31140	29440	18490	17950	15770	14820	20900	15210

CAL YR 1977 TOTAL 136162 MEAN 373 MAX 1880 MIN 235 AC-FT 270100
WTR YR 1978 TOTAL 155023 MEAN 425 MAX 1880 MIN 223 AC-FT 307500

14209500 CLACKAMAS RIVER ABOVE THREE LYNX CREEK, OR

LOCATION.--Lat 45°07'30", long 122°04'20", in NE¼ sec.21, T.5 S., R.6 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.1 mi (0.2 km) upstream from Three Lynx Creek, 0.25 mi (0.40 km) downstream from powerplant, 17 mi (27 km) southeast of Estacada, and at mile 47.8 (76.9 km).

DRAINAGE AREA.--479 mi^2 (1,241 km^2).

PERIOD OF RECORD.--April 1909 to December 1913, October 1921 to current year. Prior to October 1911 (monthly discharge only), published in WSP 1318.

REVISED RECORDS.--WSP 1148: Drainage area. WSP 1248: 1910(M), 1912, 1948-50(M).

GAGE.--Water-stage recorder. Datum of gage is 1,091.69 ft (332.747 m) National Geodetic Vertical Datum of 1929 (levels by Portland General Electric Co.). Apr. 23, 1909, to Jan. 4, 1914, nonrecording gage at about same site and datum. Nov. 1, 1921, to Dec. 27, 1924, water-stage recorder at present site at datum 0.91 ft (0.277 m) higher.

REMARKS.--Records good. Minor regulation since May 1956 by Timothy Lake (see station 14208600). Considerable diurnal fluctuation during period of low flow.

AVERAGE DISCHARGE.--61 years, 1,994 ft^3/s (56.47 m^3/s), 56.53 in/yr (1,436 mm/yr), 1,445,000 acre-ft/yr (1.78 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,200 ft^3/s (1,930 m^3/s) Dec. 22, 1964, gage height, 21.7 ft (6.61 m), from floodmark, from rating curve extended above 34,100 ft^3/s (966 m^3/s) on basis of slope-area measurement at gage height 15.06 ft (4.590 m); minimum, 324 ft^3/s (9.18 m^3/s) Oct. 17, 1958; minimum daily, 427 ft^3/s (12.1 m^3/s) Oct. 5, 1958.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,100 ft^3/s (229 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2030	27,000	765	13.26	4.042	Dec. 13	1830	*31,300	886	*14.40	4.389
Dec. 2	2000	14,800	419	9.37	2.856						

Minimum, 490 ft^3/s (13.9 m^3/s) Oct. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1270	2640	4020	1870	2170	2010	1520	1910	1220	860	632	648
2	1140	4750	8400	1820	3160	1890	1490	1750	1190	842	676	654
3	1050	2890	9130	1950	3900	1810	1450	1660	1160	842	754	648
4	984	2140	6770	2850	3570	1750	1410	1600	1130	824	749	670
5	944	1900	5150	2950	3290	1700	1460	1550	1190	795	743	795
6	944	1660	6010	3950	3420	1660	1390	1480	1070	783	637	760
7	1130	1600	6930	3250	3590	1660	1360	1420	1100	777	692	766
8	1130	1500	4970	3340	3760	1750	1300	1380	957	760	737	754
9	1040	1390	3930	3540	3380	1780	1250	1410	1030	749	737	807
10	917	1310	3870	3460	2950	1740	1290	1460	1180	743	732	1000
11	796	1270	8040	3190	2650	1720	1340	1620	1190	737	732	1170
12	977	1260	9040	3360	2420	1690	1290	1740	1110	726	749	957
13	917	1410	21300	3310	2240	1670	1260	2020	1020	720	807	1010
14	911	2240	19100	3270	2100	1620	1240	2850	1030	715	783	932
15	885	4480	13700	3090	2030	1570	1230	3150	1170	732	812	777
16	872	3600	8800	3060	1910	1550	1250	2790	1130	842	872	842
17	866	2580	6470	3420	1850	1550	1280	2380	1070	754	860	842
18	872	2270	5030	3460	1810	1580	1320	2090	1030	726	801	902
19	859	2030	4080	3400	1820	1620	1320	1910	994	709	783	902
20	853	1800	3420	3170	1860	1670	1370	1810	969	698	830	848
21	846	1680	3020	3270	1930	1590	1400	1720	951	687	890	818
22	840	1660	2450	3270	1970	1470	1600	1600	920	681	890	830
23	866	1800	2510	2900	1990	1730	1670	1520	908	676	878	807
24	866	2860	2960	2640	2060	1930	1670	1470	902	665	944	783
25	1090	16500	3340	2560	2180	1830	1800	1470	908	659	1130	795
26	1260	13400	2910	2320	2460	1750	2680	1370	884	676	988	676
27	1140	6830	2570	2160	2340	1720	2810	1410	854	670	914	692
28	1050	5270	2260	2120	2160	1700	2520	1450	848	654	884	676
29	1140	6010	2240	2100	---	1660	2290	1380	854	648	789	670
30	2210	4950	1860	2010	---	1640	2070	1320	830	637	703	665
31	2490	---	1900	1980	---	1590	---	1260	---	632	698	---
TOTAL	33155	105680	186180	89040	70970	52600	47320	53950	30799	22619	24826	24096
MEAN	1070	3523	6006	2872	2535	1697	1577	1740	1027	730	801	803
MAX	2490	16500	21300	3950	3900	2010	2810	3150	1220	860	1130	1170
MIN	796	1260	1860	1820	1810	1470	1230	1260	830	632	632	648
CFSM	2.23	7.36	12.5	6.00	5.29	3.54	3.29	3.63	2.14	1.52	1.67	1.68
IN.	2.57	8.21	14.46	6.91	5.51	4.09	3.67	4.19	2.39	1.76	1.93	1.87
AC-FT	65760	209600	369300	176600	140800	104300	93860	107000	61090	44860	49240	47790

CAL YR 1977 TOTAL 628616 MEAN 1722 MAX 21300 MIN 573 CFSM 3.60 IN 48.82 AC-FT 1247000
WTR YR 1978 TOTAL 741235 MEAN 2031 MAX 21300 MIN 632 CFSM 4.24 IN 57.57 AC-FT 1470000

14210000 CLACKAMAS RIVER AT ESTACADA, OR

LOCATION.--Lat 45°18'00", long 122°21'10", in NW¼ sec.19, T.3 S., R.4 E., Clackamas County, Hydrologic Unit 17090011, on left bank 0.2 mi (0.3 km) downstream from River Mill Dam, 1.5 mi (2.4 km) northwest of Estacada, and at mile 23.1 (37.2 km).

DRAINAGE AREA.--671 mi^2 (1,738 km^2).

PERIOD OF RECORD.--April 1908 to current year. Monthly discharge only April 1908, published in WSP 1318. Published as "near Cazadera" January 1909 to September 1957.

REVISED RECORDS.--WSP 1248: 1908-9, 1910(M), 1916, 1917(M), 1922(M), 1923. WSP 1288: Drainage area (former site). WSP 1638: 1919(M).

GAGE.--Water-stage recorder. Datum of gage is 296.93 ft (90.504 m) National Geodetic Vertical Datum of 1929 (levels by Portland General Electric Co.). See WSP 1738 for history of changes prior to Oct. 1, 1957. Oct. 1, 1957, to Feb. 16, 1965, water-stage recorder at same site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records excellent. Large diurnal fluctuations and some regulation caused by powerplants at River Mill Dam and, since 1958, North Fork Dam. Minor regulation since 1956 by Timothy Lake (see station 14208600). Two small diversions above station for Oregon City and Estacada municipal water supply.

AVERAGE DISCHARGE.--70 years, 2,754 ft^3/s (77.99 m^3/s), 55.74 in/yr (1,416 mm/yr), 1,995,000 acre-ft/yr (2.46 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 86,900 ft^3/s (2,460 m^3/s) Dec. 22, 1964, gage height, 18.36 ft (5.596 m); minimum, 50 ft^3/s (1.42 m^3/s) Mar. 10, 1961, from rating curve extended below 260 ft^3/s (7.36 m^3/s); minimum daily, 285 ft^3/s (8.07 m^3/s) Oct. 4, 5, 1958, caused by filling of North Fork dam forebay.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft^3/s (425 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2200	42,000	1,190	12.58	3.834	Dec. 11	1730	18,200	515	8.11	2.472
Dec. 2	2230	23,800	674	9.40	2.865	Dec. 13	2030	*48,800	1,380	*13.56	4.133

Minimum, 665 ft^3/s (18.8 m^3/s) Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2290	3530	5820	2570	2820	2630	2030	2750	1790	958	740	836
2	1800	4190	11600	2530	3760	2660	1890	2580	1710	994	752	735
3	1570	4170	15200	2570	5090	2310	1960	2370	1620	1060	874	758
4	1360	3760	10600	3670	4820	2260	1850	2270	1600	1080	860	830
5	1300	2040	7880	3670	4340	2270	1850	2400	1500	1070	908	908
6	1280	1800	8660	5780	4320	2160	1900	2070	1870	965	817	1290
7	1490	1740	10900	4740	4610	2160	1900	2050	1290	930	725	874
8	1620	2050	7450	5020	5260	2280	1650	1990	1330	923	787	951
9	1300	1950	5870	5000	4840	2280	1600	1950	1270	915	799	867
10	1280	1880	5740	4820	3960	2280	1590	2160	1540	902	758	1130
11	1150	1700	12100	4240	3520	2210	1670	2210	1580	874	848	1900
12	1020	1650	13600	4280	3170	2210	1640	2750	1620	854	781	1570
13	1150	1920	30100	4320	2780	2210	1610	2740	1410	860	1030	1730
14	1150	2680	28900	4300	2750	2200	1920	4220	1320	867	979	1400
15	1130	6720	21400	4060	2750	2060	1480	5260	1550	867	958	817
16	1120	5600	13400	3940	2520	2060	1270	4520	1650	1170	1130	1020
17	1070	3690	9310	4260	2490	2050	1710	3730	1520	1080	1100	1030
18	982	3130	7150	4360	2460	2070	1750	3220	1400	902	987	1840
19	1010	2780	5820	4590	2430	2120	1790	2800	1310	848	930	1860
20	982	2400	4690	4200	2470	2170	1850	2740	1260	830	965	1700
21	982	2140	4280	4320	2610	2130	1810	2460	1230	842	1160	1680
22	975	2280	4020	4340	2490	1910	2130	2360	1130	836	1220	1490
23	1020	3170	3080	4340	2550	2230	2570	2200	1110	787	1270	1190
24	1700	4060	3600	3600	2610	2520	2240	2230	1130	764	1140	1170
25	1980	23000	4280	3270	2750	2430	2400	2230	1130	764	1600	1360
26	2260	22400	3730	3110	3250	2310	3760	2050	1160	746	1300	1110
27	1950	10200	3360	2770	3050	2210	4720	2160	1090	823	1130	1350
28	1400	7550	3050	2750	2770	2210	4000	2260	1040	764	1100	1130
29	1430	8690	3110	2870	---	2100	3470	2300	1040	758	994	848
30	2620	7330	2900	2740	---	2180	3060	2100	1030	746	848	758
31	3650	---	2800	2720	---	2030	---	1870	---	746	799	---
TOTAL	46021	150200	274400	119750	93240	68910	65070	81000	41230	27525	30289	36132
MEAN	1485	5007	8852	3863	3330	2223	2169	2613	1374	888	977	1204
MAX	3650	23000	30100	5780	5260	2660	4720	5260	1870	1170	1600	1900
MIN	975	1650	2800	2530	2430	1910	1270	1870	1030	746	725	735
CFSM	2.21	7.46	13.2	5.76	4.96	3.31	3.23	3.89	2.05	1.32	1.46	1.79
IN.	2.55	8.33	15.21	6.64	5.17	3.82	3.61	4.49	2.29	1.53	1.68	2.00
AC-FT	91280	297900	544300	237500	184900	136700	129100	160700	81780	54600	60080	71670

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CAL YR 1977  TOTAL    898158   MEAN  2461   MAX  30100   MIN 627   CFSM 3.67   IN 49.79   AC-FT   1781000
WTR YR 1978  TOTAL   1033767   MEAN  2832   MAX  30100   MIN 725   CFSM 4.22   IN 57.31   AC-FT   2050000
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14211000 CLACKAMAS RIVER NEAR CLACKAMAS, OR

LOCATION.--Lat 45°23'36", long 122°31'54", in NE¼SW¼ sec.14, T.2 S., R.2 E., Clackamas County, Hydrologic Unit 17090011, on left bank 0.8 mi (1.3 km) upstream from Johnson Creek, 2.1 mi (3.4 km) southeast of Clackamas, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--930 mi² (2,409 km²) at gage, 936 mi² (2,424 km²) at Gladstone Bridge 3.6 mi (5.8 km) downstream, where high-flow discharge measurements are made.

PERIOD OF RECORD.--September 1911 to April 1912 (published as "at Park Place"), October 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 50.68 ft (15.447 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Sept. 15, 1911, to Apr. 22, 1912, nonrecording gage at site 3.6 mi (5.8 km) downstream at different datum. Oct. 1, 1962, to Sept. 10, 1969, water-stage recorder at site 300 ft (91 m) downstream at present datum.

REMARKS.--Records good. Diurnal fluctuations and some regulation by powerplants and several storage dams upstream, operated by Portland General Electric Co. Small diversions above station for Estacada municipal water supply. All records given herein are for gage site.

AVERAGE DISCHARGE.--16 years, 3,707 ft³/s (105.0 m³/s), 54.13 in/yr (1,375 mm/yr), 2,686,000 acre-ft/yr (3.31 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft³/s (3,400 m³/s) Dec. 22, 1964, gage height, 27.0 ft (8.23 m), from floodmarks; minimum, 336 ft³/s (9.52 m³/s) Sept. 1, 11, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft³/s (453 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 26	0130	41,300	1,170	14.95	4.557	Dec. 13	2230	*51,400	1,460	*16.90	5.151
Dec. 2	2400	29,000	821	12.25	3.734						

Minimum, 722 ft³/s (20.4 m³/s) Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2910	4390	7250	3220	3720	3460	2220	3830	2100	1100	924	964
2	2040	5520	13800	3150	5000	3420	2070	3320	1990	1110	932	932
3	1900	5300	20500	3180	6690	2870	2150	3010	1850	1190	1040	841
4	1620	4790	14600	4630	6430	2820	2060	2810	1800	1250	1050	972
5	1440	2810	11000	4840	5760	2740	2030	2910	1740	1250	1090	1010
6	1440	2350	11000	7690	5690	2550	2110	2520	2060	1140	1020	1230
7	1590	2270	14000	6830	5960	2510	2100	2420	1420	1060	893	1240
8	1930	2470	9870	6910	6690	2670	1870	2350	1510	1050	900	1120
9	1560	2390	7380	6910	6330	2640	1770	2240	1430	1030	956	1020
10	1380	2310	7280	6620	5300	2610	1740	2440	1650	1020	893	1180
11	1330	2110	15600	5850	4690	2550	1790	2550	1840	989	980	1980
12	1150	2030	18100	5760	4190	2640	1780	3230	1770	972	924	1880
13	1200	2330	30900	5760	3580	2600	1740	3440	1720	956	1210	1760
14	1240	3150	35300	5720	3400	2580	1900	6400	1620	956	1230	1610
15	1230	7950	27300	5450	3420	2420	1840	8270	1740	972	1220	900
16	1210	7180	18100	5260	3100	2370	1630	6910	1850	1550	1560	1100
17	1160	4960	13100	5690	3010	2350	1900	5600	1720	1610	1440	1200
18	1060	4060	10100	5760	2940	2380	2020	4630	1600	1280	1280	1900
19	1030	3600	7950	6260	2870	2390	2120	3800	1510	1170	1170	1970
20	1080	3070	6450	5760	2880	2410	2310	3510	1420	1120	1220	1820
21	1050	2700	5780	5800	2990	2390	2240	3070	1390	1100	1510	1800
22	1030	2740	5410	5890	2940	2150	2660	2880	1310	1080	1590	1600
23	1060	3950	4170	5720	2910	2380	3340	2640	1290	1030	1780	1400
24	1710	6470	4630	5000	2990	2790	2870	2570	1290	980	1590	1270
25	2120	25200	5540	4350	3370	2710	2910	2640	1300	972	1900	1400
26	2440	27900	5130	4170	4430	2510	5150	2420	1310	940	1740	1250
27	2260	13700	4190	3690	4410	2410	7840	2580	1260	1040	1470	1340
28	1600	10400	3950	3440	3800	2390	6540	2740	1160	964	1370	1270
29	1650	11100	4060	3540	---	2280	5430	2740	1160	964	1230	964
30	2710	9670	3780	3340	---	2340	4510	2570	1160	940	1070	805
31	4510	---	3620	3390	---	2230	---	2240	---	932	989	---
TOTAL	51640	188870	349840	159580	119490	79560	82640	105280	46970	33717	38171	39728
MEAN	1666	6296	11290	5148	4268	2566	2755	3396	1566	1088	1231	1324
MAX	4510	27900	35300	7690	6690	3460	7840	8270	2100	1610	1900	1980
MIN	1030	2030	3620	3150	2870	2150	1630	2240	1160	932	893	805
CFSM	1.79	6.77	12.1	5.54	4.59	2.76	2.96	3.65	1.68	1.17	1.32	1.42
IN.	2.07	7.55	13.99	6.38	4.78	3.18	3.31	4.21	1.88	1.35	1.53	1.59
AC-FT	102400	374600	693900	316500	237000	157800	163900	208800	93160	66880	75710	78800

CAL YR 1977 TOTAL 1107742 MEAN 3035 MAX 35300 MIN 580 CFSM 3.26 IN 44.31 AC-FT 2197000
WTR YR 1978 TOTAL 1295486 MEAN 3549 MAX 35300 MIN 805 CFSM 3.82 IN 51.82 AC-FT 2570000

14211500 JOHNSON CREEK AT SYCAMORE, OR

LOCATION.--Lat 45°28'40", long 122°30'24", in lot 2, SW¼ sec.13, T.1 S., R.2 E., Multnomah County, Hydrologic Unit 17090012, on right bank 0.3 mi (0.5 km) southwest of Sycamore station, 2.5 mi (4.0 km) east of city limits of Portland, and at mile 10.2 (16.4 km).

DRAINAGE AREA.--26.5 mi^2 (68.6 km^2).

PERIOD OF RECORD.--July 1940 to current year.

REVISED RECORDS.--WSP 1318: 1941(M). WDR OR-75-1: 1974.

GAGE.--Water-stage recorder and V-notch weir. Datum of gage is 228.47 ft (69.638 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those below 10 ft^3/s (0.28 m^3/s), which are fair. Slight diurnal fluctuation at low flow caused by recreational ponds upstream. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--38 years, 54.8 ft^3/s (1.552 m^3/s), 26.39 in/yr (670 mm/yr), 39,700 acre-ft/yr (49.0 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,620 ft^3/s (74.2 m^3/s) Dec. 22, 1964, gage height, 14.68 ft (4.474 m); minimum, 0.08 ft^3/s (0.002 m^3/s) Aug. 21, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s (14.2 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	1700	1,100	31.2	9.68	2.950	Dec. 13	1500	*2,250	63.7	*13.89	4.234
Dec. 2	2200	1,500	42.5	11.23	3.423						

Minimum, 0.67 ft^3/s (0.019 m^3/s) Aug. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	55	103	51	205	61	13	56	12	4.3	1.6	3.0
2	13	82	716	41	240	47	16	41	10	5.0	1.6	2.6
3	12	54	646	45	171	40	23	34	9.7	4.7	1.8	2.8
4	9.4	37	329	72	119	39	18	31	9.1	5.0	1.6	4.5
5	7.9	44	203	133	99	34	33	32	8.5	4.5	1.3	7.1
6	8.5	33	272	208	99	27	29	25	7.7	4.1	1.3	4.7
7	18	33	219	146	184	36	23	21	7.4	3.8	1.3	4.3
8	13	28	132	170	192	46	19	18	7.1	3.3	1.1	6.0
9	10	24	96	158	142	36	18	17	9.1	3.0	1.1	8.5
10	8.5	21	146	128	100	32	16	17	9.1	3.0	1.0	15
11	7.7	19	639	100	78	37	14	25	8.5	2.8	.92	16
12	6.9	18	452	103	64	39	14	20	7.7	2.8	3.5	9.1
13	6.8	56	1510	101	52	43	13	115	10	2.6	11	9.1
14	5.7	70	840	101	48	37	21	411	18	2.4	3.8	9.1
15	4.7	132	522	105	60	32	19	375	18	8.5	18	8.0
16	4.3	70	297	136	49	27	42	163	11	24	22	7.1
17	3.9	49	267	176	43	24	34	96	9.1	10	11	9.4
18	3.3	67	171	155	38	24	60	66	8.3	7.7	6.0	7.1
19	3.1	58	126	178	35	21	59	48	7.7	5.5	4.5	6.0
20	2.8	42	95	133	32	19	80	36	7.4	4.7	10	5.5
21	2.7	33	76	180	29	18	84	29	6.5	4.1	8.8	5.2
22	2.5	31	63	156	26	17	172	24	6.2	3.8	7.1	5.0
23	4.7	87	56	109	25	19	122	21	7.4	3.0	6.5	4.7
24	8.3	350	69	83	29	19	82	20	8.0	2.6	12	4.7
25	16	961	67	74	70	19	60	18	6.5	2.2	10	4.5
26	19	413	54	68	155	17	101	18	6.0	2.4	7.1	3.8
27	11	237	46	55	103	16	167	24	5.2	3.0	5.7	5.0
28	9.4	217	41	51	77	15	132	19	5.0	2.2	4.7	5.5
29	25	236	66	46	---	14	90	16	5.0	2.2	3.8	3.0
30	53	144	79	39	---	14	70	15	4.5	1.8	3.3	2.6
31	38	---	64	91	---	13	---	13	---	1.6	3.0	---
TOTAL	356.1	3701	8462	3392	2564	882	1644	1864	255.7	140.6	176.42	188.9
MEAN	11.5	123	273	109	91.6	28.5	54.8	60.1	8.52	4.54	5.69	6.30
MAX	53	961	1510	208	240	61	172	411	18	24	22	16
MIN	2.5	18	41	39	25	13	13	13	4.5	1.6	.92	2.6
CFSM	.43	4.64	10.3	4.11	3.46	1.08	2.07	2.27	.32	.17	.22	.24
IN.	.50	5.20	11.88	4.76	3.60	1.24	2.31	2.62	.36	.20	.25	.27
AC-FT	706	7340	16780	6730	5090	1750	3260	3700	507	279	350	375

CAL YR 1977 TOTAL 17906.40 MEAN 49.1 MAX 1510 MIN .24 CFSM 1.85 IN 25.14 AC-FT 35520
WTR YR 1978 TOTAL 23626.72 MEAN 64.7 MAX 1510 MIN .92 CFSM 2.44 IN 33.17 AC-FT 46860

14211720 WILLAMETTE RIVER AT PORTLAND, OR
(National stream-quality accounting network station)

LOCATION.--Lat 45°31'07", long 122°40'00", in NW¼NE¼ sec.3, T.1 S., R.1 E., Multnomah County, Hydrologic Unit 17090012, in pier at east end of drawspan on upstream side of Morrison Bridge in Portland and at mile 12.8 (20.6 km).

DRAINAGE AREA.--11,100 mi^2 (28,700 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year. Gage-height records collected in this vicinity since 1879 are in reports of the U.S. Weather Bureau.

GAGE.--Acoustic velocity meter (AVM) with water-stage and velocity-index recorder. Datum of gage is 1.55 ft (0.472 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Weather Bureau).

REMARKS.--Water-discharge records fair. Flow regulated by many reservoirs upstream (see elsewhere in this report). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--6 years, 33,010 ft^3/s (935 m^3/s), 23,920.000 acre-ft/yr (29.5 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 283,000 ft^3/s (8,010 m^3/s) Jan. 18, 1974; maximum gage height, 23.84 ft (7.266 m) Jan. 18, 1974; minimum daily discharge, 4,200 ft^3/s (119 m^3/s) July 10, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 7, 1894, and June 1, 1948, reached stages of 33.0 ft (10.06 m) and 30.0 ft (9.14 m), respectively, from information by U.S. Weather Bureau.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 237,000 ft^3/s (6,710 m^3/s) Dec. 16; maximum gage height, 18.27 ft (5.569 m) Dec. 15; minimum daily discharge, 4,200 ft^3/s (119 m^3/s) July 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19100	30000	95300	61400	33600	25700	14400	29400	16000	8600	6100	9900
2	17100	39000	105000	55400	48000	23900	12200	26000	15500	8200	5500	10800
3	16100	40700	141000	53900	60900	20700	13000	22500	16400	8700	6600	10600
4	13900	35900	132000	70000	69400	22500	14200	20900	14200	8300	6800	10300
5	13300	31200	119000	75300	66200	20600	15700	19600	12900	8200	8200	10200
6	13800	29900	111000	107000	62800	18200	17700	18800	12600	8200	7300	9700
7	16000	27200	115000	114000	59400	18500	20200	19000	11400	9000	7100	11100
8	18000	25800	109000	102000	64400	19900	19300	16300	9600	8300	6300	12400
9	17300	23800	101000	94400	66500	20700	18000	15400	9600	7600	7200	13400
10	16300	22500	96000	85800	63100	20300	15800	15600	8800	4200	6300	16400
11	16200	20400	113000	76100	56600	19900	15400	15900	12000	7700	5100	20700
12	16000	19800	129000	70900	51100	19500	15600	17100	12500	6000	6400	24600
13	15200	21200	168000	69500	45400	18600	13700	21200	11800	9100	7700	24700
14	15200	25200	228000	73100	41000	19100	13300	29700	11300	9400	9200	22700
15	14600	44200	234000	70400	37300	17600	13100	41100	11000	9300	9200	22800
16	13900	56400	237000	68600	33100	18600	14900	46000	11900	8900	8900	22200
17	12500	51600	224000	72300	32000	17300	15500	42800	14500	8600	9400	21400
18	12100	44400	196000	74100	31400	17400	16000	37100	12600	8000	8900	20700
19	13500	40000	168000	77700	29700	17400	18100	31500	11200	8000	9200	20300
20	13700	35500	141000	74100	27400	15400	18900	30600	11300	8700	9400	20700
21	12400	32300	128000	70500	26100	15800	20100	23600	11600	6600	9000	21000
22	11600	31400	118000	74300	25500	14100	24100	20400	10400	7300	10500	20100
23	10900	43000	108000	74200	24900	12500	30600	17900	9900	7900	10700	20000
24	11500	74000	102000	66800	23800	13700	35000	18100	9800	8200	10300	19400
25	12400	130000	105000	60400	24900	17000	32800	18300	9700	7000	11100	18600
26	16000	172000	104000	55100	27300	17500	33100	18200	9300	5500	12600	17800
27	16800	148000	94400	49100	28100	16900	41800	17800	10000	4800	12900	18300
28	15600	121000	78600	44500	27100	16000	46400	20200	8000	6400	12600	17600
29	16000	107000	71200	40300	---	15300	40300	20500	9200	9400	11500	16600
30	20700	104000	68700	36400	---	13600	33600	18300	9200	9200	10500	15400
31	27600	---	65600	34000	---	13300	---	18000	---	6500	8200	---
TOTAL	475300	1627400	4005800	2151600	1187200	557500	652800	727800	344200	241800	270700	520400
MEAN	15330	54250	129200	69410	42400	17980	21760	23480	11470	7800	8732	17350
MAX	27600	172000	237000	114000	69400	25700	46400	46000	16400	9400	12900	24700
MIN	10900	19800	65600	34000	23800	12500	12200	15400	8000	4200	5100	9700
AC-FT	942800	3228000	7946000	4268000	2355000	1106000	1295000	1444000	682700	479600	536900	1032000

CAL YR 1977 TOTAL 9961100 MEAN 27290 MAX 237000 MIN 5850 AC-FT 19760000
WTR YR 1978 TOTAL 12762500 MEAN 34970 MAX 237000 MIN 4200 AC-FT 25310000

NOTE.--AVM not operational Oct. 1 to Feb. 6.

14211720 WILLAMETTE RIVER AT PORTLAND, OR--Continued
(National stream quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1975 to current year.
WATER TEMPERATURES: November 1975 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily recorded, 120 micromhos Feb. 8, 1977; minimum, 44 micromhos Dec. 3, 1975.
WATER TEMPERATURES: Maximum, 27.5°C July 29, Aug. 7, 8, 1978; minimum, 2.0°C Jan. 12-14, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily recorded, 108 micromhos July 21, 22; minimum, 50 micromhos Dec. 14, 15.
WATER TEMPERATURES: Maximum, 27.5°C July 29, Aug. 7, 8; minimum recorded, 4.5°C Nov. 23, 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT 07...	1115	16000	14.3	7.2	9.5	70	--	--	16	6.1
NOV 04...	1300	35900	10.1	6.7	10.6	52	480	710	15	6.4
29...	1100	107000	9.0	6.6	12.6	56	K5000	K500	13	4.5
DEC 30...	1100	68700	5.8	7.1	14.2	61	2100	380	16	5.6
JAN 27...	0900	49000	6.3	7.1	13.0	71	140	810	16	6.4
FEB 15...	1100	37300	5.8	7.2	12.8	77	330	130	17	7.6
MAR 22...	1130	14100	11.0	7.1	8.7	89	K76	K12	16	7.7
APR 20...	1100	18900	11.0	7.5	10.7	96	60	45	16	9.4
MAY 18...	1000	37100	11.7	6.9	10.8	73	320	100	14	6.3
JUN 06...	1330	12600	19.0	7.1	9.0	87	53	K17	15	7.7
JUL 14...	1200	9400	21.0	7.8	9.3	102	K60	K7	17	8.5
AUG 21...	1200	9000	20.4	7.5	7.6	86	280	48	16	7.6
SEP 19...	1100	20300	14.5	7.6	10.2	72	160	K10	16	6.0

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT 07...	1.8	4.7	.8	23	3.8	4.1	.0	--	--	.10
NOV 04...	1.7	3.5	.8	20	4.3	4.0	.0	.54	--	.07
29...	1.5	3.2	1.0	14	3.3	3.5	.1	1.9	--	.02
DEC 30...	1.9	3.2	.7	17	3.0	3.0	.0	.34	--	.12
JAN 27...	2.2	4.1	.8	22	4.3	3.6	.1	.25	.84	.12
FEB 15...	2.3	4.1	.7	22	4.8	4.4	.0	.20	.17	.09
MAR 22...	2.5	4.6	.8	27	4.9	5.7	.0	.16	.21	.11
APR 20...	2.5	5.5	.8	29	3.8	6.5	.0	.46	.38	.16
MAY 18...	2.1	4.0	.7	22	4.4	3.9	.0	--	--	.08
JUN 06...	2.7	5.5	.8	26	8.5	5.9	.0	.30	.76	.11
JUL 14...	2.6	6.5	1.1	24	7.1	7.3	.1	.36	.48	.00
AUG 21...	2.8	5.8	1.0	27	5.0	4.5	.1	.30	.22	.06
SEP 19...	1.9	5.6	.9	25	4.4	4.1	.1	.30	.24	.08

14211720 WILLAMETTE RIVER AT PORTLAND, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
OCT									
07...	.28	--	.06	.09	--	--	2.1	23	0
NOV									
04...	.31	--	.06	.10	--	--	2.9	23	3
29...	.85	--	.08	.17	--	--	4.3	17	3
DEC									
30...	1.2	--	.04	.08	--	--	2.1	22	5
JAN									
27...	.61	1.6	.04	.02	--	--	1.8	25	3
FEB									
15...	.61	.87	.05	.08	--	--	2.1	28	6
MAR									
22...	.62	.94	.05	.07	--	--	2.5	30	2
APR									
20...	.53	1.1	.04	.08	1.9	.5	--	34	5
MAY									
18...	.42	--	.03	.08	--	--	2.7	24	2
JUN									
06...	.40	1.3	.05	.04	--	--	2.6	30	4
JUL									
14...	.45	.93	.05	.07	2.8	.3	--	32	8
AUG									
21...	.38	.66	.07	.10	--	--	3.0	31	4
SEP									
19...	.25	.57	.06	.06	--	--	2.0	23	0

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER DAY)	TURBIDITY (JTU)	TURBIDITY (NTU)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
OCT									
07...	50	51	2160	5	--	12	518	88	--
NOV									
04...	46	48	4460	10	--	18	1750	92	--
29...	44	38	12700	25	--	92	26600	84	74
DEC									
30...	50	44	9270	20	--	34	6310	92	--
JAN									
27...	65	51	8600	10	--	15	1980	90	31
FEB									
15...	66	54	6650	10	--	18	1810	81	26
MAR									
22...	64	58	2440	3	--	9	343	86	3
APR									
20...	58	62	2960	3	--	12	612	80	8
MAY									
18...	54	48	5410	--	7.0	13	1300	92	15
JUN									
06...	60	62	2040	--	2.8	13	442	84	16
JUL									
14...	65	65	1650	--	1.8	8	203	92	38
AUG									
21...	68	59	1650	--	4.5	13	316	92	11
SEP									
19...	57	54	3120	--	4.3	14	767	86	13

14211720 WILLAMETTE RIVER AT PORTLAND, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	IRON, DISSOLVED (UG/L AS FE)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)
NOV 04...	90	740	10	40	1	1	0	0	2
JAN 27...	60	770	20	30	1	1	0	0	0
APR 20...	90	500	20	30	2	0	300	300	5
JUL 14...	60	250	0	20	0	0	200	200	5

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
NOV 04...	10	5	5	0	<50	6	20	7	<100
JAN 27...	2	0	10	0	0	11	23	1	16
APR 20...	4	0	10	0	0	8	22	--	--
JUL 14...	4	0	0	0	3	9	24	--	--

DATE	SILVER, DISSOLVED (UG/L AS AG)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	SELENIUM, DISSOLVED (UG/L AS SE)	SELENIUM, TOTAL (UG/L AS SE)	MERCURY DISSOLVED (UG/L AS HG)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)
NOV 04...	0	<10	20	40	0	0	.0	.0
JAN 27...	0	1	20	30	0	0	.0	.0
APR 20...	0	0	20	30	0	0	.0	.0
JUL 14...	0	0	20	20	0	0	.0	.0

DATE	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)	URANIUM DISSOLVED, EXTRACTION (UG/L)
JAN 27...	<.5	<.4	.6	.4	.7	.4	.13	<.01
AUG 21...	<.6	<.4	1.2	<.4	1.3	<.4	.03	<.01

14211720 WILLAMETTE RIVER AT PORTLAND, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO JULY 1978

		NOV 29.77	MAR 22.78	MAY 18.78	JUN 6.78	JUL 14.78
DATE		NOV 29.77	MAR 22.78	MAY 18.78	JUN 6.78	JUL 14.78
TIME		1100	1130	1000	1340	1200
TOTAL CELLS/ML		1100	3100	1300	4000	3500
DIVERSITY:	DIVISION	0.8	0.3	1.2	0.6	1.4
	.CLASS	0.8	0.3	1.2	0.6	1.4
	..ORDER	0.8	1.2	2.0	1.5	2.1
	...FAMILY	1.8	1.9	3.1	2.4	3.0
	....GENUS	2.4	2.1	3.6	2.7	3.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...HYDRODICTYACEAE										
....PEDIASTRUM	--	-	--	-	200#	16	--	-	--	-
...MICRACTINIACEAE										
....MICRACTINIUM	--	-	--	-	--	-	--	-	430	12
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	26	2	200	5	240	7
....CLOSTERIOPSIS	--	-	29	1	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	230	6
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	170	5
....OOCYSTIS	--	-	--	-	77	6	--	-	--	-
....SELENASTRUM	--	-	--	-	26	2	--	-	--	-
...SCENEDESMACEAE										
....CRUCIGENIA	--	-	--	-	--	-	--	-	57	2
....SCENEDESMUS	270#	25	--	-	--	-	330	8	170	5
....TETRASTRUM	--	-	--	-	--	-	130	3	--	-
..TETRASPORALES										
...PALMELLACEAE										
....SPHAEROCYSTIS	--	-	--	-	--	-	--	-	57	2
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	51	4	--	-	*	0
..ZYGNEMATALES										
...DESMIDIACEAE										
....CLOSTERIUM	--	-	--	-	--	-	--	-	*	0
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	2000#	63	180	14	1900#	48	86	2
....MELOSIRA	--	-	--	-	150	12	--	-	950#	27
....STEPHANODISCUS	--	-	--	-	--	-	99	2	--	-
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	340#	31	200	6	100	8	130	3	43	1
....COCCONEIS	68	6	--	-	--	-	--	-	--	-
....RHOICOSPHENIA	68	6	--	-	--	-	33	1	--	-
...CYMBELLACEAE										
....CYMBELLA	--	-	86	3	100	8	160	4	86	2
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	140	5	--	-	490	12	630#	18
....HANNAEA	--	-	170	6	26	2	--	-	--	-
....SYNEDRA	--	-	29	1	150	12	33	1	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	140	13	110	4	--	-	130	3	43	1
...NAVICULACEAE										
....NAVICULA	--	-	57	2	51	4	66	2	29	1
...NITZSCHIACEAE										
....NITZSCHIA	200#	19	200	6	51	4	300	7	*	0
CRYPTOPHYTA (CRYPTOMONADS)										
.CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	--	-	--	-	--	-	57	2
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROCCOCCALES										
...CHROCCOCCAEAE										
....ANACYSTIS	--	-	110	4	--	-	--	-	110	3
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	--	-	--	-	--	-	*	0
....TRACHELOMONAS	--	-	--	-	51	4	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..GYMNODINIALES										
...GYMNODINIACEAE										
....GYMNODINIUM	--	-	--	-	--	-	--	-	86	2
..PERIDINIALES										
...GLENODINIACEAE										
....GLENODINIUM	--	-	--	-	26	2	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

14211720 WILLAMETTE RIVER AT PORTLAND, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
NOV 29...	25	.315	.551	.000	.000

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	83	54	70	86	84	92	66	82	97	95	74
2	74	86	53	69	87	83	92	68	80	97	93	81
3	74	81	51	70	87	83	92	71	81	97	92	86
4	72	74	51	70	83	84	92	74	82	98	92	86
5	71	70	52	72	71	86	91	76	84	98	90	84
6	72	66	51	72	64	87	91	77	86	---	88	85
7	71	68	52	67	68	88	89	79	87	84	85	87
8	75	69	51	63	70	87	87	82	88	90	84	87
9	77	70	52	66	72	87	87	84	90	95	84	86
10	75	72	53	70	71	89	88	86	91	96	86	89
11	74	72	54	72	71	90	89	84	93	98	87	73
12	74	73	55	75	72	91	87	86	97	95	87	74
13	75	73	54	76	73	88	86	86	98	95	86	80
14	75	73	50	75	76	89	86	83	98	97	86	75
15	75	73	50	77	78	91	88	76	97	---	86	68
16	75	69	53	78	78	91	89	75	94	---	86	68
17	76	60	55	79	82	90	90	71	89	---	87	69
18	77	55	55	78	85	90	89	68	87	---	85	69
19	78	56	57	77	86	89	93	68	85	104	84	69
20	78	60	56	76	88	89	94	70	81	107	86	70
21	79	62	56	75	88	90	94	69	83	108	86	71
22	85	63	55	75	88	91	92	73	87	108	83	71
23	84	63	55	75	88	93	86	74	88	107	66	70
24	82	64	56	72	89	94	86	76	88	105	76	71
25	83	59	56	72	87	92	83	79	90	100	82	72
26	85	53	54	74	87	92	79	82	91	98	90	73
27	87	51	55	76	85	92	71	82	91	97	91	74
28	89	51	56	77	86	92	67	82	94	98	80	75
29	90	56	61	79	---	92	63	81	97	98	77	76
30	86	56	64	80	---	91	64	82	97	97	84	76
31	84	---	66	83	---	91	---	84	---	97	77	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.5	14.0	10.5	10.0			---	---	7.5	7.0	9.0	8.5
2	15.0	14.0	12.0	10.0			---	---	7.5	7.0	8.5	8.0
3	14.5	14.0	11.0	10.0			---	---	8.0	7.5	8.0	7.5
4	14.5	12.5	10.5	9.5			---	---	8.0	7.5	8.0	7.5
5	14.0	12.5	10.0	9.0			---	---	8.5	8.0	8.0	7.0
6	14.0	12.5	10.0	9.0			---	---	9.0	8.5	7.5	7.0
7	14.0	12.5	10.0	9.0			---	---	9.0	8.5	7.5	7.5
8	13.5	12.0	10.0	9.0			---	---	9.0	8.5	8.0	7.5
9	14.0	12.0	10.0	9.0			---	---	8.5	8.0	8.5	8.0
10	14.0	12.5	10.0	9.5			---	---	8.0	7.5	9.5	8.5
11	14.0	12.5	10.0	9.0			---	---	7.5	7.0	9.5	9.0
12	14.0	12.5	9.5	9.0			7.5	7.5	7.0	6.0	10.0	9.0
13	14.0	13.0	10.0	9.0			7.5	7.5	6.0	6.0	10.0	9.5
14	14.0	12.5	9.5	9.0			7.5	7.5	6.0	5.5	10.0	9.5
15	15.0	13.0	9.5	9.0			7.5	7.5	6.0	5.5	10.0	9.5
16	14.5	13.0	9.5	9.0			7.5	7.5	6.0	5.5	10.0	9.0
17	14.5	13.0	9.5	9.0			8.0	7.5	6.5	6.0	10.0	9.5
18	14.5	13.5	9.0	8.5			8.0	8.0	6.5	6.0	10.0	9.5
19	14.5	13.0	8.5	7.5			8.0	8.0	7.0	6.5	10.5	10.0
20	14.5	13.0	8.0	6.5			8.0	8.0	7.5	7.0	11.0	10.0
21	14.5	13.0	7.0	5.5			8.5	8.0	8.5	7.5	11.5	10.5
22	14.0	13.0	6.0	5.0			8.5	8.0	9.0	8.5	11.5	11.0
23	14.5	13.0	5.5	4.5			8.5	7.5	9.0	8.5	12.5	12.0
24	14.0	12.5	5.5	4.5			7.5	7.0	9.0	8.5	12.5	12.0
25	14.0	12.5	7.5	6.0			7.0	6.5	9.0	8.5	12.5	12.5
26	14.0	12.5	---	---			7.0	6.5	9.0	8.5	12.5	12.0
27	13.0	12.0	---	---			6.5	6.5	9.5	9.0	12.5	12.5
28	12.5	12.0	---	---			7.0	6.5	9.5	9.0	12.5	12.5
29	12.5	11.5	---	---			7.0	6.5	---	---	12.5	12.5
30	12.0	11.0	---	---			7.5	7.0	---	---	13.0	12.5
31	11.5	10.0	---	---			7.5	7.0	---	---	13.0	13.0
MONTH	16.5	10.0	12.0	4.5			8.5	6.5	9.5	5.5	13.0	7.0

14211720 WILLAMETTE RIVER AT PORTLAND, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.0	13.0	13.5	12.5	16.0	15.0	20.0	19.5	---	24.0	19.0	18.5
2	13.0	13.0	13.5	13.0	17.5	15.5	20.0	19.5	27.0	24.0	20.0	19.0
3	13.0	12.5	13.5	12.5	18.0	16.5	20.5	19.5	27.0	24.0	20.0	19.0
4	12.5	12.5	13.5	12.5	19.5	17.5	20.5	20.0	26.0	23.5	21.0	19.5
5	12.5	12.0	13.5	12.5	20.0	18.5	21.0	20.0	27.0	23.0	20.0	19.0
6	12.0	12.0	13.5	12.5	20.5	19.5	21.0	20.0	27.0	22.5	19.5	18.5
7	12.0	11.5	13.5	12.5	22.0	20.0	20.5	20.0	27.5	22.5	19.0	18.0
8	12.0	11.5	14.0	13.0	22.0	20.0	20.5	19.5	27.5	23.0	18.5	17.5
9	12.5	11.5	14.5	13.5	22.5	20.5	20.0	19.0	27.0	23.0	18.0	17.0
10	12.5	12.0	14.5	14.0	22.0	19.5	20.0	18.5	24.5	23.5	18.5	16.0
11	12.5	12.5	14.5	14.0	21.5	19.5	19.0	18.5	24.5	23.5	18.5	16.0
12	13.0	12.0	15.0	14.0	---	---	20.5	18.5	24.5	23.0	17.5	15.5
13	13.5	12.5	15.0	14.0	---	---	20.0	18.5	24.0	22.5	17.0	15.5
14	13.5	13.0	14.5	13.0	---	---	21.5	19.0	25.0	22.0	17.0	15.5
15	13.5	13.0	13.0	12.0	19.0	18.0	21.5	20.5	23.5	22.5	16.5	15.0
16	13.5	13.0	12.5	11.5	18.5	18.0	21.5	20.5	23.0	22.0	17.0	15.5
17	13.0	12.5	12.0	11.5	19.5	18.0	---	---	23.0	22.0	17.5	15.0
18	13.0	12.0	12.5	11.5	19.5	18.0	---	---	22.0	21.0	17.5	15.5
19	12.5	12.0	13.5	12.0	19.0	18.0	---	---	21.0	20.5	17.0	15.0
20	12.5	11.0	15.0	13.0	18.5	18.0	21.0	20.0	21.0	20.0	16.5	15.0
21	12.0	11.5	15.5	14.5	---	---	22.0	20.5	21.0	19.5	16.0	14.5
22	12.0	11.5	15.5	15.0	---	---	25.5	22.0	20.0	19.5	16.5	14.5
23	12.0	11.5	16.5	15.0	19.5	19.0	25.5	22.5	20.0	19.0	16.5	14.5
24	---	---	16.0	15.5	19.0	18.5	25.0	23.0	19.5	18.5	21.5	14.5
25	---	---	15.5	15.0	19.5	18.5	26.5	23.0	19.5	18.5	21.5	15.5
26	12.0	11.0	14.5	14.0	20.0	19.0	26.0	23.5	19.5	18.0	17.0	14.5
27	12.0	11.5	14.5	13.5	20.0	19.0	26.0	23.5	19.0	18.0	16.0	15.5
28	12.0	11.5	14.0	13.0	20.5	19.0	26.5	23.5	19.0	17.5	17.0	16.0
29	12.5	12.0	14.0	13.0	19.5	19.5	27.5	24.0	19.5	18.0	17.0	16.5
30	13.0	12.0	14.5	13.5	20.5	19.5	---	24.0	19.0	18.5	17.0	16.5
31	---	---	15.5	14.5	---	---	---	24.5	19.0	18.5	---	---
MONTH	13.5	11.0	16.5	11.5	22.5	15.0	27.5	18.5	27.5	17.5	21.5	14.5

14222880 COLUMBIA RIVER AT COLUMBIA CITY, OR

LOCATION.--Lat 45°53'41", long 122°48'23", in NE¼NE¼ sec.28, T.5 N., R.1 W., Columbia County, Hydrologic Unit 17080003, on left bank in Columbia City, at the pumping station at the corner of "E" Street and "The Strand", and at mile 84.0 (135.2 km).

DRAINAGE AREA.--254,000 mi^2 (657,900 km^2), approximately.

PERIOD OF RECORD.--October 1971 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at Columbia River datum, 0.79 ft (0.241 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 19.68 ft (5.998 m) Jan. 19, 1974; minimum, -0.10 ft (-0.030 m) Sept. 9, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 15.99 ft (4.874 m) Dec. 15; minimum recorded, 0.67 ft (0.204 m) Aug. 6.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	4.65	1.76	3.18	5.96	2.32	4.13	7.73	6.01	6.82	5.48	3.80	4.48
2	3.83	1.19	2.51	4.99	3.61	4.40	11.11	6.88	8.50	5.26	3.18	4.04
3	3.75	1.04	2.23	4.63	3.13	4.00	12.62	11.17	12.12	5.75	2.70	4.29
4	3.52	1.30	2.30	4.10	2.38	3.39	12.02	10.53	11.18	7.34	4.13	5.61
5	3.53	.83	2.13	4.59	2.11	3.44	10.49	9.76	10.10	8.73	5.35	6.77
6	3.75	1.07	2.36	4.17	1.88	2.98	---	---	---	8.63	6.18	7.20
7	3.71	1.46	2.66	4.62	1.73	3.09	---	---	---	8.91	6.38	7.41
8	3.81	1.14	2.51	4.77	1.74	3.20	---	---	---	9.37	6.72	7.81
9	3.64	.93	2.33	5.66	2.47	3.90	---	---	---	9.35	6.62	7.67
10	3.66	.75	2.29	6.28	2.87	4.43	---	---	---	9.38	6.48	7.77
11	4.15	1.03	2.56	6.53	3.03	4.55	---	---	---	9.03	7.04	7.97
12	4.64	1.12	2.87	6.20	2.74	4.29	---	---	---	8.44	6.76	7.62
13	5.17	1.65	3.39	6.25	2.73	4.38	---	---	---	8.20	6.56	7.29
14	5.11	1.84	3.35	6.46	2.74	4.61	---	---	---	8.09	6.26	7.07
15	4.99	1.48	3.08	6.60	3.45	5.08	15.99	15.38	15.75	8.15	6.03	6.84
16	4.63	1.15	2.84	6.07	3.93	5.10	15.75	15.04	15.31	7.63	5.33	6.49
17	4.68	1.13	2.77	5.59	3.81	4.72	15.05	14.24	14.67	7.88	6.03	6.79
18	4.66	1.41	2.95	5.68	3.88	4.70	14.22	12.69	13.44	7.64	5.97	6.69
19	4.41	1.73	2.96	5.79	3.75	4.75	12.67	10.96	11.79	8.27	6.66	7.26
20	3.88	1.27	2.66	4.90	2.76	3.77	10.93	9.26	10.22	7.87	5.84	7.00
21	3.79	.87	2.42	5.81	2.[illegible]5	4.14	9.48	7.71	8.79	7.75	5.63	6.57
22	3.85	.95	2.43	6.15	3.84	4.91	8.61	6.95	7.87	7.49	5.32	6.47
23	4.44	1.29	2.84	6.43	4.10	5.14	8.41	6.45	7.51	7.23	5.27	6.22
24	4.98	1.32	3.20	6.81	4.24	5.48	7.94	5.70	6.93	7.58	5.72	6.63
25	5.15	1.85	3.49	8.58	4.61	6.79	7.37	5.03	6.28	7.25	5.59	6.39
26	5.06	1.78	3.44	9.81	7.97	9.05	6.73	4.79	5.60	7.11	5.25	6.12
27	5.64	2.10	3.84	9.27	8.16	8.75	6.68	4.48	5.59	6.84	4.90	5.88
28	5.93	2.66	4.34	8.47	7.48	7.97	6.94	4.52	5.77	6.91	5.17	5.95
29	5.79	2.86	4.15	8.11	7.07	7.59	7.03	5.04	6.07	6.71	4.67	5.52
30	5.47	2.66	4.14	7.44	6.64	7.04	6.84	5.12	5.94	6.20	3.92	5.02
31	4.95	2.32	3.55	---	---	---	6.13	4.52	5.18	6.56	4.14	5.17
MONTH	5.93	.75	2.96	9.81	1.73	4.99	15.99	4.48	9.16	9.38	2.70	6.45

14222880 COLUMBIA RIVER AT COLUMBIA CITY, OR--Continued

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6.55	4.32	5.26	6.73	4.54	5.37	6.79	4.74	6.31	7.27	5.64	6.63
2	7.07	4.92	5.76	6.31	4.06	5.02	6.37	4.81	5.58	7.27	5.65	6.39
3	7.36	5.39	6.16	5.78	3.91	4.76	7.36	5.75	6.50	7.20	5.95	6.52
4	7.43	4.94	6.06	6.21	3.28	4.90	7.84	6.14	7.08	7.53	5.85	6.70
5	8.15	5.37	6.47	6.05	2.87	4.36	7.81	5.98	6.95	7.51	6.11	6.83
6	8.46	5.60	6.85	6.34	3.35	4.63	7.95	6.05	7.03	7.76	6.28	7.08
7	9.52	5.99	7.54	7.18	4.05	5.41	8.09	6.19	7.12	7.80	5.71	6.68
8	9.24	6.95	8.04	7.13	4.17	5.64	7.61	5.38	6.39	7.13	5.57	6.39
9	9.54	7.32	8.39	6.72	4.01	5.38	6.94	4.84	5.78	7.61	5.74	6.58
10	9.08	6.98	7.98	6.80	4.13	5.50	6.76	4.74	5.75	7.06	5.00	6.05
11	8.53	6.48	7.36	6.73	3.62	5.22	7.05	5.15	5.98	7.16	5.42	6.20
12	7.77	5.78	6.60	6.40	3.43	4.71	6.42	4.64	5.51	6.67	5.29	5.99
13	6.94	4.72	5.65	6.33	3.13	4.50	6.21	4.82	5.44	6.91	5.53	6.22
14	6.12	4.30	5.06	5.45	2.77	3.90	6.33	4.65	5.58	6.75	5.24	6.20
15	6.11	4.35	5.02	5.20	2.68	3.79	6.33	4.97	5.64	7.69	6.20	6.67
16	5.74	4.11	4.81	4.92	2.59	3.71	6.00	4.37	5.32	8.00	7.25	7.54
17	5.77	3.98	4.80	4.49	2.35	3.39	5.40	3.68	4.44	8.10	7.15	7.60
18	5.51	3.10	4.48	4.43	2.24	3.36	5.63	4.26	5.03	8.18	7.11	7.59
19	5.26	2.69	3.96	4.22	1.82	3.09	6.03	4.51	5.29	8.25	7.37	7.79
20	5.73	3.00	4.27	4.47	2.35	3.26	6.85	5.20	5.99	8.65	6.09	7.36
21	5.89	3.30	4.54	5.28	2.73	3.91	7.32	5.51	6.49	7.84	5.28	6.35
22	6.30	3.94	5.03	5.68	3.05	4.31	7.80	5.08	6.46	7.68	5.32	6.53
23	6.29	3.74	4.94	6.43	3.10	4.98	7.36	5.07	6.14	8.11	5.89	7.10
24	6.27	3.63	5.02	6.64	4.31	5.57	7.54	5.11	6.37	8.78	6.71	7.80
25	6.34	4.01	5.14	7.16	4.75	6.02	8.17	5.72	6.75	9.02	7.26	8.04
26	6.53	4.03	5.16	7.24	4.78	5.89	8.06	5.74	6.75	8.70	6.97	7.81
27	6.51	3.91	5.16	7.18	4.49	5.69	7.66	5.78	6.62	8.21	6.82	7.51
28	6.81	4.32	5.47	7.12	4.64	5.71	7.93	6.23	7.03	7.73	5.47	6.65
29	---	---	---	7.08	4.74	5.76	7.64	6.29	6.96	6.55	4.23	5.33
30	---	---	---	6.97	4.87	5.78	7.27	5.86	6.58	6.52	4.66	5.26
31	---	---	---	6.62	5.00	5.80	---	---	---	6.71	4.59	5.56
MONTH	9.54	2.69	5.75	7.24	1.82	4.82	8.17	3.68	6.16	9.02	4.23	6.74

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.47	4.81	5.52	---	---	---	4.79	1.92	3.28	5.72	2.92	4.29
2	7.09	5.18	5.97	---	---	---	5.20	2.52	3.69	5.51	2.26	3.79
3	7.17	3.90	5.44	---	---	---	5.42	2.44	3.80	4.68	1.41	3.14
4	6.21	3.75	4.87	---	---	---	5.55	2.43	3.81	4.59	1.42	3.12
5	6.57	4.13	5.21	---	---	---	4.77	1.28	2.99	4.71	1.45	3.18
6	6.81	4.50	5.62	---	---	---	3.97	.67	2.45	5.45	2.17	3.72
7	6.58	4.47	5.46	---	---	---	3.90	.89	2.54	6.19	3.01	4.45
8	6.60	4.80	5.71	---	---	---	4.65	1.63	3.08	6.08	3.67	4.68
9	7.29	5.65	6.38	---	---	---	4.68	1.70	3.26	6.48	3.97	4.97
10	7.65	6.14	6.92	---	---	---	4.55	1.56	2.98	5.81	3.33	4.39
11	7.81	6.58	7.23	---	---	---	4.78	1.63	2.92	5.46	2.48	3.64
12	7.26	6.18	6.73	---	---	---	4.45	1.34	2.75	5.44	2.88	3.92
13	7.20	5.57	6.41	---	---	---	4.31	.91	2.22	5.61	2.73	4.14
14	6.67	5.09	5.80	---	---	---	4.40	.81	2.32	6.06	3.50	4.86
15	6.58	5.32	5.83	---	---	---	4.93	1.82	3.29	6.91	3.90	5.42
16	---	---	---	---	---	---	5.52	2.27	3.83	6.13	3.01	4.57
17	---	---	---	---	---	---	5.75	2.38	3.93	5.84	2.88	4.35
18	---	---	---	---	---	---	5.67	2.36	3.98	5.97	2.77	4.23
19	---	---	---	---	---	---	5.73	2.37	3.96	6.06	3.01	4.37
20	---	---	---	---	---	---	5.10	1.70	3.47	6.08	3.66	4.75
21	---	---	---	6.60	3.45	4.80	5.43	1.82	3.61	5.98	3.40	4.48
22	---	---	---	6.78	3.60	5.10	5.17	2.10	3.72	5.18	3.03	4.04
23	---	---	---	6.04	2.74	4.40	5.05	1.95	3.45	4.52	2.61	3.62
24	---	---	---	6.25	3.10	4.40	5.31	2.31	3.58	3.97	1.90	2.90
25	---	---	---	5.85	3.00	4.50	4.70	2.19	3.34	4.20	1.46	2.61
26	---	---	---	5.15	2.85	4.30	4.23	1.48	2.54	4.20	2.11	3.25
27	---	---	---	5.29	2.52	3.84	4.04	1.07	2.30	4.46	2.17	3.27
28	---	---	---	5.19	2.01	3.42	3.98	1.19	2.52	4.45	1.91	3.22
29	---	---	---	4.78	1.71	2.84	4.21	1.33	2.92	4.51	1.74	3.19
30	---	---	---	4.27	.97	2.29	5.04	2.36	3.57	4.96	2.22	3.65
31	---	---	---	4.04	.84	2.48	4.94	2.22	3.66	---	---	---
MONTH	7.81	3.75	5.94	6.78	.84	3.85	5.75	.67	3.22	6.91	1.41	3.94
YEAR	15.99	.67	5.29									

14222910 COLUMBIA RIVER AT KALAMA, WA

LOCATION.--Lat 46°01'13", long 122°51'30", in NW¼ sec.7, T.6 N., R.1 W., Cowlitz County, Hydrologic Unit 17080003, temperature recorder on right bank at dock of Dow Chemical Company, 1.0 mi (1.6 km) northwest of Kalama, and at mile 74.3 (119.5 km).

DRAINAGE AREA.--254,000 mi² (657,900 km²), approximately.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: September 1968 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 23.5°C Aug. 13-16, 18, 1977; minimum, 0.0°C Jan. 10-14, 1974.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 22.5°C Aug. 9-11; minimum, 2.5°C Jan. 4, 5.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	16.5	13.5	13.0	8.5	8.0	5.0	4.0	4.5	4.0	6.0	5.0
2	16.5	16.0	13.5	13.0	8.5	8.0	4.5	3.5	4.0	4.0	6.0	4.5
3	16.0	15.5	13.0	12.5	8.5	8.5	4.0	3.5	4.5	4.0	6.0	5.0
4	16.5	15.5	12.5	12.5	8.5	8.5	3.5	2.5	5.0	4.0	6.0	4.5
5	16.5	15.5	12.5	12.0	8.5	8.0	3.5	2.5	5.0	4.5	5.5	4.5
6	16.0	15.0	12.0	11.5	8.0	7.5	3.5	3.0	5.5	5.0	6.0	5.0
7	15.0	15.0	12.0	11.5	8.0	7.5	3.5	3.0	6.0	5.0	6.0	5.0
8	16.0	15.0	12.0	11.5	8.0	7.5	4.0	3.5	6.0	5.0	6.5	5.5
9	16.0	15.0	12.0	11.5	7.5	7.0	4.5	4.0	6.0	5.5	6.5	5.5
10	16.0	15.0	12.0	11.5	7.0	6.5	5.0	4.0	6.0	5.5	6.5	5.5
11	15.5	15.0	12.0	11.5	7.0	6.5	4.5	4.0	6.0	5.0	7.0	6.0
12	15.5	15.0	12.0	11.0	7.0	7.0	4.0	3.5	5.5	4.5	7.0	6.0
13	15.0	14.5	12.0	11.0	7.5	7.0	4.0	4.0	5.0	4.0	7.0	6.0
14	15.0	14.5	11.5	11.0	7.5	7.5	4.0	3.5	5.0	4.5	6.5	6.0
15	15.0	14.5	11.5	11.0	8.0	7.5	4.0	3.0	5.0	4.5	6.5	5.5
16	15.0	14.5	11.0	11.0	8.0	7.5	4.5	4.0	5.0	4.5	7.0	5.5
17	15.5	14.5	11.0	11.0	7.5	7.5	4.5	3.5	5.0	4.5	7.0	6.0
18	15.0	14.5	10.5	10.5	7.5	7.0	4.0	4.0	4.5	4.5	7.0	6.0
19	15.0	14.5	10.5	10.0	7.0	7.0	4.0	3.5	5.0	4.0	7.0	6.0
20	15.0	14.0	10.0	9.5	7.0	6.0	4.0	4.0	5.5	4.5	7.5	6.5
21	15.0	14.0	9.5	8.5	6.0	5.5	5.0	4.0	6.0	5.0	7.0	6.5
22	15.0	14.0	8.5	7.5	6.0	5.5	5.5	4.5	6.0	5.0	7.5	7.0
23	15.0	14.0	7.5	7.5	6.0	5.5	5.0	4.5	5.5	5.0	7.5	7.0
24	15.0	14.0	7.5	7.5	5.5	5.5	5.0	5.0	6.0	5.5	7.5	7.0
25	14.5	14.5	7.5	7.0	6.0	5.5	5.0	4.5	6.0	5.5	7.5	7.0
26	15.0	14.0	8.0	7.5	6.0	5.5	5.0	4.0	6.0	5.0	8.0	7.5
27	15.0	14.0	8.0	8.0	6.0	5.0	5.0	4.5	6.0	5.5	8.0	7.5
28	14.5	14.0	8.5	8.0	5.0	4.5	5.0	4.0	6.0	5.0	8.5	8.0
29	14.0	13.5	8.5	8.0	5.0	5.0	5.0	4.0	---	---	8.5	8.0
30	14.0	13.5	8.5	8.0	5.0	4.5	5.0	4.0	---	---	9.0	8.0
31	13.5	13.0	---	---	5.0	4.5	5.0	4.5	---	---	9.0	8.0
MONTH	17.0	13.0	13.5	7.0	8.5	4.5	5.5	2.5	6.0	4.0	9.0	4.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	8.5	10.5	10.0	14.5	14.0	18.0	17.5	21.5	20.5	20.0	19.5
2	9.0	8.5	10.5	10.0	15.0	14.5	18.0	17.5	21.0	20.0	20.0	19.5
3	9.0	8.5	11.0	10.0	15.5	15.0	18.0	17.0	21.0	20.0	20.0	19.5
4	9.5	9.0	11.0	10.5	16.0	15.5	17.5	17.0	21.0	20.5	20.0	19.5
5	9.5	9.0	11.0	10.5	16.0	15.5	17.0	17.0	21.5	20.5	20.0	19.0
6	9.5	8.5	11.0	10.5	16.0	15.5	17.5	17.0	21.5	21.0	19.5	19.0
7	9.5	9.0	11.5	11.0	16.5	16.0	18.0	17.5	21.5	21.0	19.5	19.0
8	9.5	9.0	12.0	11.5	16.5	16.0	18.0	18.0	22.0	20.5	19.0	18.5
9	10.0	9.0	12.0	12.0	16.5	16.0	18.5	18.0	22.5	21.5	19.0	18.5
10	10.0	9.0	12.5	12.0	16.0	16.0	18.5	18.5	22.5	22.0	19.0	18.0
11	10.0	9.5	12.0	12.0	16.0	15.5	18.5	18.0	22.5	22.0	19.0	18.5
12	10.0	9.0	12.5	12.0	16.0	16.0	18.5	18.0	22.0	22.0	19.0	18.5
13	10.0	9.5	12.0	12.0	16.5	16.0	19.0	18.0	22.0	21.5	19.0	18.5
14	10.0	9.0	12.0	12.0	16.5	16.0	19.0	19.0	22.0	20.5	18.5	18.0
15	9.5	9.0	12.0	11.5	16.5	16.0	19.5	19.5	22.0	21.0	18.5	18.5
16	9.5	9.0	12.0	11.5	16.5	16.0	19.5	19.5	22.0	21.0	19.0	18.0
17	9.5	9.0	12.5	12.0	16.5	15.5	19.5	19.0	21.5	20.0	18.5	17.5
18	9.5	9.0	12.5	12.0	17.0	16.0	19.5	18.5	21.0	20.5	18.5	17.5
19	10.0	9.5	13.0	12.5	17.0	16.5	19.0	18.5	21.0	20.0	18.0	17.0
20	10.0	9.5	13.5	13.0	17.5	16.5	19.5	19.0	21.0	20.0	17.5	17.0
21	10.0	9.5	14.0	13.0	17.5	17.0	20.0	19.5	21.0	20.0	17.0	16.5
22	10.0	9.5	14.0	13.0	17.5	17.0	20.5	20.0	20.5	20.0	17.0	16.5
23	10.0	9.0	13.5	13.0	17.0	17.0	21.0	20.5	20.0	19.5	17.0	16.5
24	9.5	9.5	13.5	13.0	17.5	17.0	21.0	21.0	20.0	19.5	17.0	16.5
25	10.0	9.5	13.5	13.0	17.0	16.5	21.5	20.5	19.5	19.0	17.5	17.0
26	10.0	10.0	13.5	13.5	17.0	16.5	21.0	20.5	19.5	19.0	17.5	17.0
27	10.0	10.0	13.5	13.5	17.5	16.5	21.0	20.5	20.0	19.5	17.5	17.0
28	10.0	10.0	14.0	13.5	18.0	17.0	21.0	20.0	20.0	19.5	18.0	17.5
29	10.5	10.0	14.0	13.5	18.0	18.0	20.5	20.0	20.0	19.5	18.0	17.5
30	10.5	10.0	14.0	13.5	18.0	17.5	21.0	20.0	20.5	20.0	18.0	17.5
31	---	---	14.5	14.0	---	---	21.0	20.5	20.0	20.0	---	---
MONTH	10.5	8.5	14.5	10.0	18.0	14.0	21.5	17.0	22.5	19.0	20.0	16.5

14223600 KALAMA RIVER ABOVE SPENCER CREEK, NEAR KALAMA, WA

LOCATION.--Lat 46°02'51", long 122°50'11", in SE¼NW¼ sec.32, T. 7 N., R.1 W., Cowlitz County, Hydrologic Unit 17080003, on right bank at Modrow Road Bridge, 2.1 mi (3.4 km) north of Kalama city limits, 0.6 mi (1.0 km) upstream from Spencer Creek, and at mile 2.8 (4.5 km).

DRAINAGE AREA.--202 mi² (325 km²), approximately.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: May to November 1970, July 1971 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 21.5°C Aug. 12, 1977; minimum, 0.0°C Dec. 7-13, 1972, Jan. 9, 1973, Jan. 6-10, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 20.0°C July 22, 23, 25, Aug. 8, 9; minimum recorded, 2.5°C Nov. 21.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	10.0	9.0	8.5	8.0	7.0					---	---
2	11.0	9.0	9.0	7.5	---	---					---	---
3	10.5	8.0	7.5	6.5	---	---					---	---
4	10.0	8.0	7.5	6.5	---	---					---	---
5	10.0	8.0	7.5	6.5	---	---					---	---
6	9.5	9.0	8.0	7.5	---	---					---	---
7	10.0	9.0	8.0	7.0	---	---					---	---
8	11.0	9.5	7.0	5.5	---	---					---	---
9	10.5	9.5	7.0	6.0	---	---					---	---
10	9.5	8.5	8.0	7.0	---	---					---	---
11	9.0	8.0	8.0	8.0	---	---					---	---
12	10.0	8.0	8.0	6.0	---	---					---	---
13	10.5	9.5	8.0	8.0	---	---					---	---
14	10.0	9.5	8.0	7.5	---	---					---	---
15	10.5	9.0	8.0	7.5	---	---					---	---
16	11.0	10.0	8.0	6.5	---	---					---	---
17	10.0	9.0	7.0	5.5	---	---					---	---
18	9.5	8.5	6.0	5.0	---	---					---	---
19	9.5	9.0	5.5	4.5	---	---					---	---
20	9.5	9.0	4.5	3.0	---	---					---	---
21	9.5	8.5	3.0	2.5	---	---					---	---
22	9.5	9.0	3.5	3.0	---	---					---	---
23	10.5	9.5	5.5	3.5	---	---					9.0	8.5
24	10.0	10.0	6.5	5.5	---	---					8.5	8.0
25	10.5	9.5	8.0	6.5	---	---					8.5	7.5
26	10.0	8.5	8.0	7.5	---	---					9.0	7.5
27	8.5	7.5	7.5	7.5	---	---					---	---
28	8.5	7.0	8.0	7.0	---	---					---	---
29	9.0	8.0	8.0	7.0	---	---					---	---
30	8.5	8.0	7.0	6.0	---	---					---	---
31	8.0	7.5	---	---	---	---					---	---
MONTH	11.0	7.0	9.0	2.5	8.0	7.0					9.0	7.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	9.5	8.0	14.0	11.5	17.0	13.5	17.5	16.0	15.0	13.5
2	---	---	9.5	9.0	15.0	12.5	16.0	14.5	18.0	15.5	16.0	14.0
3	---	---	9.5	8.5	16.0	13.5	14.5	12.5	18.5	16.5	15.0	14.0
4	---	---	9.0	8.0	17.0	14.0	12.5	11.5	19.0	17.0	14.0	12.5
5	---	---	9.0	7.5	17.0	14.5	14.0	12.0	19.0	16.5	13.5	12.5
6	---	---	10.5	8.0	16.0	14.0	16.5	13.0	19.0	16.5	13.5	12.0
7	---	---	11.0	9.5	16.0	13.0	17.0	14.5	19.5	17.0	13.0	12.0
8	---	---	12.0	10.0	16.0	12.5	16.5	15.0	20.0	18.0	12.5	11.5
9	---	---	11.5	9.5	15.0	13.0	15.5	13.5	20.0	18.0	12.5	12.0
10	---	---	9.5	8.5	13.0	11.5	14.5	13.0	19.0	17.0	12.5	12.0
11	---	---	9.5	8.5	14.0	11.0	14.0	12.5	17.0	15.5	12.0	11.0
12	8.5	7.0	9.0	9.0	14.0	12.5	16.5	12.0	16.0	15.0	12.5	11.5
13	8.0	6.5	9.0	8.5	13.0	11.5	18.5	14.0	16.5	14.0	12.0	11.5
14	7.5	6.5	8.5	8.0	12.0	11.0	18.5	15.5	15.0	14.5	12.5	11.0
15	8.0	7.0	9.0	7.5	12.0	10.5	17.5	15.0	15.0	14.5	13.0	11.5
16	7.5	7.0	9.0	8.0	12.0	11.0	15.0	13.5	16.0	14.0	12.5	10.5
17	7.5	6.5	9.5	9.0	14.5	10.5	14.5	13.0	15.5	13.5	12.0	10.5
18	8.5	7.0	11.0	8.5	16.0	12.5	16.5	13.5	15.0	13.5	12.0	10.0
19	8.5	7.5	12.5	10.5	16.0	13.0	18.0	14.5	15.0	14.5	12.0	10.0
20	8.0	7.5	13.5	11.5	17.0	13.5	19.0	15.5	14.5	13.5	11.5	10.0
21	7.5	6.5	13.0	10.0	15.0	13.0	19.5	16.0	14.0	13.0	12.0	10.5
22	7.0	6.0	10.0	9.0	15.0	12.0	20.0	16.5	14.5	13.5	12.0	11.5
23	8.5	6.5	10.0	9.0	14.5	13.0	20.0	17.0	14.0	13.0	12.5	11.0
24	10.0	8.0	10.0	9.0	14.0	12.0	19.5	16.5	14.0	12.5	13.0	11.5
25	9.5	8.5	10.5	9.5	13.0	12.0	20.0	17.0	14.5	12.5	14.5	12.0
26	9.5	8.5	10.0	9.5	15.5	11.5	19.5	17.5	15.0	12.5	14.5	12.5
27	9.0	8.0	10.0	9.5	18.0	13.5	17.5	16.0	15.0	12.5	14.0	13.0
28	9.5	8.5	10.5	9.5	19.0	15.0	17.5	15.0	16.0	13.0	13.5	12.5
29	9.0	7.5	10.5	9.0	17.5	14.5	19.0	15.5	17.0	14.0	13.0	11.5
30	9.0	8.0	12.0	9.5	15.5	13.0	18.5	16.5	16.5	15.0	13.0	12.0
31	---	---	12.0	10.5	---	---	18.0	16.0	16.0	14.5	---	---
MONTH	10.0	6.0	13.5	7.5	19.0	10.5	20.0	11.5	20.0	12.5	16.0	10.0

14245295 COLUMBIA RIVER AT RAINIER, OR

LOCATION.--Lat 46°06'02", long 122°57'47", in SE¼SW¼ sec.8, T.7 N., R.2 W., Columbia County, Hydrologic Unit 17080003, on left bank at Rainier, 1.2 mi (1.9 km) downstream from Nice Creek, 500 ft (152 m) upstream from Interstate bridge, and at mile 66.1 (106.4 km).

DRAINAGE AREA.--256,700 mi^2 (664,900 km^2), approximately.

WATER-STAGE RECORDS

PERIOD OF RECORD.--November 1971 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at Columbia River datum, 0.34 ft (0.104 m) below National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 16.52 ft (5.035 m) Jan. 19, 1974; minimum, 0.46 ft (0.140 m) July 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 11.03 ft (3.362 m) Dec. 19; minimum, 0.78 ft (0.238 m) Aug. 6.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.12	2.21	3.90	7.33	2.38	4.93	---	---	---	6.35	3.50	4.60
2	5.25	1.70	3.26	5.98	3.58	4.85	---	---	---	6.30	3.00	4.35
3	5.04	1.31	2.97	5.49	2.96	4.38	---	---	---	7.00	3.00	4.85
4	4.94	1.52	3.04	5.02	2.49	3.89	---	---	---	8.35	4.10	6.00
5	4.90	1.32	3.05	5.90	2.48	4.05	---	---	---	10.00	5.50	6.90
6	5.11	1.56	3.26	5.56	2.15	3.66	---	---	---	9.60	5.30	7.15
7	5.15	1.79	3.41	5.94	2.03	3.67	---	---	---	9.80	5.70	[illegible]
8	5.14	1.71	3.30	6.11	1.97	3.73	---	---	---	10.40	5.75	[illegible]
9	5.22	1.26	3.13	7.06	2.65	4.46	---	---	---	10.45	5.75	[illegible]
10	5.27	1.17	3.08	7.72	2.99	4.97	---	---	---	10.30	5.65	7.60
11	5.74	1.30	3.33	8.19	3.00	5.21	---	---	---	9.75	6.10	7.70
12	6.28	1.49	3.70	7.88	2.93	5.01	---	---	---	9.05	5.85	7.40
13	6.75	1.84	4.12	7.90	2.78	5.13	---	---	---	8.70	5.70	7.00
14	6.83	2.01	4.09	7.97	2.82	5.34	---	---	---	8.80	5.50	7.10
15	6.75	1.77	3.96	7.90	3.34	5.66	---	---	---	9.15	5.50	6.90
16	6.25	1.62	3.67	7.08	3.68	5.43	---	---	---	8.60	5.10	6.70
17	6.20	1.32	3.55	6.58	3.42	4.97	---	---	---	8.70	5.50	6.75
18	6.11	1.62	3.76	6.67	3.44	4.84	---	---	---	8.25	5.50	6.55
19	5.55	1.80	3.61	6.80	3.65	4.86	11.03	9.11	9.93	8.70	5.85	7.00
20	5.31	1.41	3.35	6.11	2.72	4.10	9.75	7.60	8.80	8.45	5.20	6.90
21	5.21	1.24	3.18	6.90	2.58	4.44	9.19	6.52	7.91	8.70	5.05	6.70
22	5.44	1.33	3.20	7.37	3.73	5.20	9.02	5.95	7.45	8.35	4.65	6.60
23	6.09	1.83	3.67	7.65	3.95	5.49	9.00	5.60	7.25	7.95	4.70	6.15
24	6.64	1.77	4.00	7.92	4.15	5.83	8.70	4.95	6.90	8.10	4.75	6.45
25	6.85	2.20	4.32	9.40	4.17	7.05	8.30	4.30	6.35	8.05	4.61	6.42
26	6.58	2.16	4.18	9.86	6.93	8.56	7.60	3.90	5.65	7.87	4.48	6.09
27	7.09	2.18	4.52	9.62	7.06	8.31	7.55	3.90	5.60	7.49	4.25	5.84
28	7.46	2.67	5.02	8.80	6.63	7.68	7.65	3.95	5.65	7.60	4.40	5.92
29	7.38	2.90	4.90	---	---	---	7.80	4.40	6.05	7.55	4.21	5.58
30	7.01	2.91	4.91	---	---	---	7.60	4.50	6.00	7.12	3.52	5.16
31	6.29	2.46	4.24	---	---	---	6.95	4.05	5.25	7.61	3.82	5.34
MONTH	7.46	1.17	3.73	9.86	1.97	5.20	11.03	3.90	6.83	10.45	3.00	6.46

14245295 COLUMBIA RIVER AT RAINIER, OR--Continued

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.61	3.99	5.48	7.68	4.03	5.44	7.31	4.15	5.71	7.44	4.72	6.06
2	8.12	4.37	5.91	7.22	3.58	5.10	7.19	4.12	5.55	7.57	4.59	5.89
3	8.35	4.64	6.13	6.68	3.20	4.85	8.21	4.90	6.17	7.65	4.80	5.93
4	8.50	4.28	6.15	7.31	3.13	5.14	8.33	5.27	6.76	7.79	4.93	6.09
5	9.28	4.93	6.63	7.39	2.75	4.84	8.57	5.10	6.77	7.83	4.95	6.16
6	9.64	5.22	7.04	7.57	3.27	5.00	8.65	5.21	6.76	7.91	5.07	6.36
7	10.66	5.30	7.75	8.52	3.82	5.80	8.66	5.23	6.83	8.04	4.80	6.12
8	10.33	6.16	8.06	8.39	3.78	5.99	8.37	4.52	6.23	7.61	4.45	5.98
9	10.40	6.35	8.36	7.96	3.65	5.71	7.74	4.02	5.67	7.96	4.71	6.19
10	9.73	6.22	7.80	7.94	3.81	5.76	7.57	3.94	5.70	7.63	4.11	5.85
11	9.19	5.77	7.19	7.94	3.53	5.56	7.54	4.23	5.72	7.67	4.46	5.97
12	8.36	5.22	6.48	7.62	3.16	5.10	6.89	3.75	5.24	6.90	4.22	5.66
13	7.98	4.30	5.79	7.66	3.12	4.99	6.58	3.92	5.23	7.13	4.55	5.95
14	7.12	3.94	5.23	6.55	2.61	4.30	6.61	4.04	5.36	7.00	4.64	5.96
15	6.97	3.90	5.09	6.10	2.58	4.13	6.47	4.16	5.40	7.45	5.25	6.20
16	6.47	3.58	4.83	5.74	2.53	4.02	6.27	3.84	5.17	7.72	5.80	6.60
17	6.48	3.47	4.85	5.46	2.34	3.87	6.20	3.20	4.52	7.83	5.70	6.57
18	6.52	2.86	4.69	5.37	2.24	3.83	6.58	3.71	4.96	7.99	5.65	6.56
19	6.45	2.49	4.35	5.38	1.84	3.62	6.74	4.05	5.27	8.48	5.84	6.82
20	6.93	2.94	4.65	5.68	2.16	3.78	7.51	4.48	5.88	8.68	5.30	6.74
21	7.00	3.28	4.85	6.45	2.55	4.32	7.99	4.79	6.37	8.55	4.29	6.07
22	7.35	3.48	5.25	6.86	2.65	4.65	8.48	4.65	6.40	8.56	4.59	6.29
23	7.48	3.21	5.28	7.51	3.50	5.28	8.35	4.49	6.15	8.85	5.06	6.80
24	7.38	3.30	5.32	7.61	3.98	5.64	8.50	4.56	6.35	9.33	5.68	7.37
25	7.50	3.63	5.50	8.19	4.38	6.06	9.05	4.85	6.67	9.33	5.93	7.50
26	7.70	3.66	5.47	8.27	4.24	5.94	8.87	4.97	6.62	8.96	5.72	7.28
27	7.64	3.62	5.44	8.24	3.99	5.79	8.37	4.72	6.41	8.41	5.55	6.97
28	7.89	3.93	5.63	8.15	4.06	5.83	8.25	5.10	6.57	7.55	4.58	6.22
29	---	---	---	8.09	4.08	5.85	7.72	5.07	6.42	6.60	3.51	5.11
30	---	---	---	7.70	4.16	5.70	7.41	4.76	6.15	7.04	3.68	4.84
31	---	---	---	7.14	4.26	5.62	---	---	---	6.96	3.84	5.13
MONTH	10.66	2.49	5.90	8.52	1.84	5.08	9.05	3.20	5.97	9.33	3.51	6.23

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.15	3.92	5.19	7.29	3.46	5.04	5.95	1.79	3.61	6.95	2.80	4.83
2	7.70	4.32	5.69	7.37	3.34	5.01	6.31	2.19	3.92	6.92	2.26	4.49
3	7.93	3.69	5.39	7.16	2.78	4.65	6.53	2.21	4.06	6.23	1.57	3.88
4	7.30	3.15	4.98	6.69	2.68	4.56	6.58	2.24	4.12	6.21	1.68	3.95
5	7.53	3.45	5.31	6.88	2.47	4.49	6.15	1.36	3.46	6.13	1.65	3.77
6	7.65	3.93	5.63	7.02	3.30	5.01	5.46	.78	3.06	6.74	2.22	4.06
7	7.45	3.66	5.46	6.99	3.08	4.93	5.21	.91	3.16	6.71	2.76	4.54
8	7.30	3.87	5.57	6.58	2.74	4.55	5.94	1.69	3.80	7.42	3.64	5.12
9	7.79	4.70	6.11	5.96	2.12	4.05	5.99	1.81	3.82	7.53	4.04	5.65
10	7.48	5.12	6.34	6.32	2.91	4.40	5.81	1.67	3.61	8.24	4.01	5.87
11	7.54	5.31	6.52	6.18	3.12	4.64	6.02	1.97	3.71	7.49	3.33	5.23
12	7.25	4.98	6.10	6.50	3.03	4.43	5.79	1.92	3.50	7.51	3.62	5.28
13	6.99	4.60	5.88	6.66	3.24	4.65	5.71	1.30	3.12	8.04	3.83	5.59
14	6.99	4.34	5.42	6.91	3.49	4.63	6.22	1.11	3.24	8.67	4.61	6.23
15	7.15	4.16	5.29	6.91	3.27	4.59	6.95	1.83	3.96	9.68	5.45	7.25
16	7.16	4.52	5.49	6.93	2.67	4.22	7.21	2.13	4.23	9.42	5.58	7.29
17	7.53	4.12	5.40	6.79	2.20	4.09	7.04	2.21	4.18	9.50	4.90	7.14
18	7.76	4.10	5.54	7.38	3.00	4.87	7.11	2.21	4.25	7.30	2.60	4.75
19	7.95	3.48	5.39	7.80	3.09	5.09	7.21	2.26	4.31	7.30	2.80	4.60
20	8.55	4.24	6.15	7.95	2.85	5.09	6.70	1.79	4.10	7.35	3.30	5.00
21	8.88	4.18	6.20	7.85	3.02	5.19	6.82	2.05	4.38	7.15	3.20	5.00
22	8.81	4.12	6.13	7.98	3.20	5.37	6.63	2.15	4.37	6.55	3.05	4.90
23	8.42	3.64	5.82	7.37	2.42	4.87	6.52	2.01	4.17	6.35	2.85	4.30
24	7.98	3.75	5.68	7.26	2.68	4.73	6.66	2.42	4.31	5.80	2.05	3.70
25	7.10	2.94	5.03	7.01	2.73	4.74	5.98	2.62	3.97	5.20	1.70	3.50
26	7.02	3.23	4.89	6.74	2.65	4.43	5.35	1.84	3.29	---	---	---
27	6.97	3.17	4.90	6.41	2.54	4.10	5.28	1.43	3.04	---	---	---
28	7.20	3.57	4.84	5.98	2.54	3.82	5.45	1.38	3.12	---	---	---
29	7.26	3.70	5.00	5.58	1.90	3.34	5.69	1.40	3.39	---	---	---
30	7.14	3.69	4.95	5.27	1.17	2.91	6.17	2.23	3.93	---	---	---
31	---	---	---	5.61	1.02	3.04	6.30	2.12	4.11	---	---	---
MONTH	8.88	2.94	5.54	7.98	1.02	4.50	7.21	.78	3.78	9.68	1.57	5.03
YEAR	11.03	.78	5.28									

14243295 COLUMBIA RIVER AT RAINIER, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: October 1971 to current year.

REMARKS.—Records do not necessarily represent average stream temperature as sensor is located in partly mixed discharge from Trojan Nuclear Generator.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: Maximum, 23.5°C Aug. 10, 11, 1977; minimum, 0.0°C Jan. 9-13, 1974.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum, 22.5°C Aug. 13; minimum, 3.0°C Jan. 4, 5.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.0	15.5	11.5	10.0	7.5	7.5	4.5	4.0	5.5	5.5	6.5	6.0
2	15.5	15.0	11.0	10.5	7.5	7.5	4.5	4.0	5.5	5.5	6.5	5.5
3	15.0	14.5	10.5	10.0	7.5	7.5	4.0	3.5	6.0	5.5	6.0	5.5
4	15.0	14.5	10.0	---	8.0	7.5	3.5	3.0	6.0	6.0	6.0	5.5
5	15.0	14.5	---	10.0	8.0	7.5	3.5	3.0	6.5	6.0	5.5	5.0
6	14.5	14.0	10.0	9.5	7.5	7.5	3.5	3.5	6.5	6.0	5.5	5.0
7	14.5	14.0	10.0	9.5	7.5	7.0	4.5	4.0	6.5	6.5	5.5	5.5
8	14.5	13.5	10.0	9.5	7.0	6.5	5.0	4.5	6.5	6.5	5.5	5.5
9	14.5	14.0	10.0	9.5	6.5	6.5	5.5	5.0	6.5	6.5	6.0	6.0
10	14.5	14.0	10.0	9.5	6.5	6.5	5.5	5.5	6.5	6.0	6.0	5.5
11	14.5	14.0	10.0	9.5	6.5	6.5	5.5	5.5	6.5	6.0	6.5	6.0
12	14.5	13.5	10.0	9.5	6.5	6.5	5.5	5.5	6.0	5.5	6.0	6.0
13	14.0	14.0	10.0	9.5	7.0	6.5	5.5	5.5	6.0	5.5	6.5	6.0
14	13.5	13.0	9.5	9.5	7.5	7.0	5.5	5.0	5.5	5.5	6.5	6.0
15	13.5	13.0	9.5	9.5	8.0	7.5	5.5	5.0	5.5	5.0	7.0	6.0
16	14.0	13.5	9.5	9.0	8.0	8.0	5.5	5.5	5.0	5.0	7.0	6.0
17	13.5	13.0	9.0	8.5	8.0	7.5	5.5	5.5	5.5	5.0	7.5	6.5
18	13.5	13.0	8.5	8.0	7.5	7.0	5.5	5.5	5.5	5.0	7.5	6.5
19	13.5	13.0	8.0	7.5	7.0	6.5	6.0	5.5	6.0	5.0	7.5	7.0
20	13.5	13.0	7.5	7.0	6.5	6.0	6.0	5.5	6.0	5.5	7.5	7.0
21	13.5	13.0	7.5	6.5	6.0	5.5	6.5	6.0	6.0	5.5	8.0	7.0
22	13.0	13.0	6.5	5.5	5.5	5.0	6.0	6.0	6.0	6.0	8.0	7.5
23	13.5	13.0	5.5	5.5	5.0	5.0	6.0	6.0	6.0	6.0	8.0	7.5
24	13.0	13.0	5.5	5.5	5.5	5.0	6.0	6.0	6.0	6.0	8.0	7.5
25	13.0	12.5	5.5	5.5	5.5	5.5	6.0	6.0	6.0	6.0	8.0	8.0
26	13.0	12.5	6.0	5.5	5.5	5.5	6.0	5.5	6.0	6.0	8.5	8.0
27	12.5	12.0	7.0	6.0	5.5	5.5	5.5	5.5	6.0	6.0	9.0	8.5
28	12.5	11.5	7.5	7.0	5.5	5.0	5.5	5.5	6.0	6.0	9.5	8.5
29	12.0	11.5	8.0	7.5	5.0	4.5	5.5	5.5	---	---	9.5	9.0
30	11.5	11.5	7.5	7.5	4.5	4.5	5.5	5.5	---	---	9.5	9.0
31	11.5	11.0	---	---	4.5	4.5	5.5	5.5	---	---	10.0	9.0
MONTH	16.0	11.0	11.5	5.5	8.0	4.5	6.5	3.0	6.5	5.0	10.0	5.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.5	9.5	11.5	11.0	15.5	14.5	18.5	17.5	21.5	20.0	19.5	19.5
2	10.0	9.5	12.0	11.5	16.0	15.0	18.0	17.5	20.5	20.0	19.5	19.0
3	10.0	9.5	12.0	11.5	16.0	15.5	17.5	17.0	20.5	20.0	19.5	19.0
4	10.0	9.5	12.0	11.5	16.5	16.0	17.0	17.0	21.0	20.0	19.0	19.0
5	10.0	9.5	12.0	11.5	17.0	16.0	17.5	16.5	21.0	20.5	19.0	18.5
6	10.0	9.5	12.0	11.5	17.0	16.5	17.5	17.0	21.5	20.5	19.0	18.5
7	10.5	9.5	12.5	12.0	17.0	16.5	18.0	17.5	21.5	20.5	18.5	18.5
8	10.5	10.0	13.0	12.5	17.0	16.5	18.0	17.5	22.0	21.0	18.5	18.0
9	10.5	10.0	13.0	13.0	17.0	16.5	18.5	18.0	22.0	21.0	18.0	18.0
10	11.0	10.5	13.0	12.5	16.5	16.5	18.5	18.0	22.0	21.5	18.0	17.5
11	11.0	10.5	13.0	12.5	17.0	16.5	18.5	18.0	21.5	21.5	18.5	17.5
12	11.0	10.0	13.0	12.5	17.0	16.5	18.5	18.0	22.0	21.5	18.5	17.5
13	10.5	10.0	13.0	12.5	17.0	16.5	19.0	18.0	22.5	21.0	18.0	18.0
14	10.5	10.5	13.0	12.5	17.0	16.5	19.5	18.5	21.5	21.0	18.0	17.5
15	10.5	10.0	13.0	12.5	17.0	16.5	19.0	19.0	21.5	21.0	18.0	17.5
16	10.5	10.0	13.5	12.5	16.5	16.5	19.5	19.0	21.0	20.5	19.0	17.5
17	10.5	10.0	13.0	12.5	17.0	16.0	19.0	19.0	20.5	20.0	17.5	17.0
18	10.5	10.0	13.5	12.5	17.5	16.5	19.0	18.5	20.5	20.0	17.0	17.0
19	11.0	10.5	14.0	13.0	17.5	17.0	19.5	18.5	20.5	20.0	17.0	16.5
20	11.0	10.5	14.5	13.5	17.5	17.0	19.5	18.5	20.0	20.0	16.5	16.5
21	11.0	10.5	14.0	13.5	17.5	17.0	20.0	19.0	20.0	19.5	16.5	16.5
22	11.0	10.5	14.0	14.0	17.5	17.0	20.5	19.5	20.0	19.5	16.5	16.0
23	11.0	10.5	14.0	13.5	17.0	17.0	21.0	20.5	19.5	19.0	16.5	16.0
24	11.0	10.5	14.0	13.5	17.5	17.0	21.0	20.5	19.5	19.0	16.5	16.5
25	11.0	11.0	14.0	13.5	17.0	17.0	21.5	20.5	19.5	19.0	17.0	16.5
26	11.0	11.0	14.0	14.0	17.5	17.0	21.0	20.5	19.5	19.0	17.0	16.5
27	11.5	11.0	14.5	14.0	18.0	17.0	21.0	20.5	19.5	19.0	17.0	16.5
28	11.5	11.0	14.5	14.0	18.5	17.5	21.0	20.0	20.5	19.0	17.0	16.5
29	11.5	10.5	15.0	14.0	18.0	18.0	21.0	20.0	20.5	19.5	17.0	16.5
30	11.5	11.0	15.0	14.0	18.0	18.0	21.0	19.5	20.0	19.5	17.0	16.5
31	---	---	15.0	14.5	---	---	21.0	19.5	20.0	19.5	---	---
MONTH	11.5	9.5	15.0	11.0	18.5	14.5	21.5	16.5	22.5	19.0	19.5	16.0

14247295 COLUMBIA RIVER AT WAUNA, OR

LOCATION.--Lat 46°09'40", long 123°24'30", in SE¼ sec.22, T.8 N., R.6 W., Clatsop County, Hydrologic Unit 17080003, on left bank at northwest end of Crown-Zellerbach wood-pulp processing plant at Wauna, and at mile 41.5 (66.8 km).

DRAINAGE AREA.--257,000 mi^2 (665,600 km^2), approximately.

PERIOD OF RECORD.--November 1971 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at Columbia River datum, 1.76 ft (0.536 m) below National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 12.10 ft (3.688 m) Dec. 15, 1977; minimum, -0.47 ft (-0.143 m) Aug. 6, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 12.10 ft (3.688 m) Dec. 15; minimum, -0.47 ft (-0.143 m) Aug. 6.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.02	.66	3.84	8.19	.82	5.02	7.76	1.76	5.24	6.80	1.25	3.81
2	6.26	.44	3.34	6.48	1.83	4.47	8.34	2.88	6.02	6.90	1.20	3.84
3	5.87	.10	3.09	6.00	1.25	4.04	8.58	4.54	6.52	7.75	1.90	4.56
4	5.85	.31	3.20	5.68	1.09	3.74	8.30	4.45	6.01	9.00	2.40	5.27
5	5.85	.63	3.41	6.69	1.39	3.99	7.95	3.85	5.51	10.80	2.95	6.28
6	5.93	.86	3.55	6.48	1.01	3.60	9.55	4.20	6.41	10.05	2.20	5.87
7	5.87	.81	3.49	6.78	.89	3.50	9.55	3.30	6.06	10.15	2.20	5.84
8	6.08	.60	3.36	7.01	.55	3.44	9.35	2.55	5.57	10.75	2.25	6.16
9	6.24	.34	3.22	8.01	.80	4.07	9.75	2.30	5.64	10.85	2.25	6.26
10	6.35	-0.09	3.09	8.61	.81	4.51	[illegible].70	2.90	6.32	10.60	2.45	6.44
11	6.81	.13	3.28	9.38	.82	4.92	11.25	2.90	6.76	9.90	2.35	6.31
12	7.51	.30	3.66	9.23	.74	4.89	10.65	3.45	6.85	9.10	2.25	5.83
13	7.90	.25	4.01	9.14	.74	5.04	11.95	3.50	8.08	8.70	2.25	5.58
14	8.08	.09	4.04	8.89	.83	5.18	10.95	5.45	8.43	9.05	2.40	5.75
15	8.20	.23	4.10	8.59	1.00	5.24	12.10	5.90	8.98	9.55	3.00	5.96
16	7.65	.01	3.84	7.48	1.29	4.72	10.30	6.35	8.02	9.20	3.35	5.89
17	7.45	-0.16	3.74	7.00	1.05	4.20	10.05	5.70	7.63	9.05	3.15	5.80
18	7.18	.08	3.86	7.15	1.11	4.04	9.60	5.30	6.94	8.50	2.70	5.37
19	6.50	.30	3.66	7.25	1.11	3.95	8.60	4.10	5.99	8.75	2.80	5.61
20	6.23	.15	3.43	6.80	1.06	3.49	7.90	3.00	5.22	8.60	2.30	5.53
21	6.32	.21	3.35	7.54	1.26	3.85	8.45	2.70	5.37	9.10	2.25	5.64
22	6.65	.09	3.37	7.97	1.40	4.46	9.00	2.50	5.59	8.60	1.75	5.33
23	7.38	.83	3.91	8.26	1.65	4.77	9.20	2.35	5.78	8.15	1.50	4.87
24	8.15	.93	4.16	8.54	1.48	5.05	9.10	1.95	5.42	8.20	1.60	4.91
25	8.22	.89	4.40	9.70	2.87	6.08	8.75	1.45	5.26	8.35	1.60	4.97
26	7.74	[illegible]	4.16	9.17	3.07	6.32	8.10	1.15	4.74	8.16	1.45	4.93
27	8.12	.84	4.45	9.32	2.93	6.21	8.05	1.15	4.77	7.73	1.53	4.74
28	8.49	1.24	4.99	8.45	2.81	5.72	8.00	1.60	4.73	7.72	1.59	4.81
29	8.46	1.42	4.98	7.76	2.73	5.41	8.15	1.90	5.24	7.82	1.63	4.64
30	7.97	1.20	4.98	7.16	2.13	4.88	7.90	1.90	5.11	7.55	1.49	4.40
31	7.14	.85	4.23	---	---	---	7.35	1.60	4.31	8.11	1.93	4.61
MONTH	8.49	-0.16	3.81	9.70	.55	4.63	12.10	1.15	6.08	10.85	1.20	5.35

14247295 COLUMBIA RIVER AT WAUNA, OR--Continued

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.22	2.19	4.91	8.25	1.80	4.73	7.48	1.55	4.64	7.29	1.64	4.38
2	8.70	2.15	5.19	7.70	1.45	4.42	7.55	1.56	4.67	7.56	1.62	4.27
3	8.80	1.85	5.12	7.25	1.15	4.29	8.50	1.98	4.92	7.61	1.78	4.19
4	9.10	1.65	5.19	7.90	1.25	4.75	8.46	2.39	5.48	7.67	1.68	4.33
5	9.85	2.15	5.58	8.25	1.00	4.77	8.86	2.48	6.06	7.86	1.44	4.32
6	10.25	2.30	6.14	8.30	1.10	4.56	8.90	2.32	5.41	7.77	1.44	4.45
7	11.25	2.90	6.70	9.30	1.65	5.34	8.80	2.18	5.26	7.90	1.32	4.46
8	10.70	3.10	6.86	9.00	1.50	4.99	8.61	1.67	4.89	7.74	.97	4.46
9	10.60	3.10	7.06	8.53	1.29	4.92	8.04	1.21	4.51	7.95	1.42	4.70
10	9.75	2.75	6.28	8.39	1.53	4.90	7.93	1.16	4.53	7.76	1.27	4.65
11	9.30	2.50	5.76	8.46	1.52	4.84	7.62	1.29	4.39	7.79	1.55	4.73
12	8.60	2.45	5.25	8.18	1.29	4.53	6.98	.99	4.03	6.77	.84	4.32
13	8.45	2.35	5.06	8.42	1.46	4.54	6.63	1.31	4.08	6.96	1.78	4.71
14	7.65	2.10	4.60	7.14	.96	3.87	6.52	1.48	4.24	6.82	2.18	4.80
15	7.40	2.00	4.44	6.60	.88	3.62	6.31	1.84	4.33	6.76	2.29	4.67
16	6.85	1.60	3.93	6.18	1.02	3.60	6.18	1.92	4.27	6.82	2.31	4.42
17	6.85	1.45	4.34	6.03	1.09	3.63	6.50	1.29	3.97	7.08	2.29	4.32
18	7.10	1.05	4.20	5.91	.96	3.62	7.17	1.48	4.24	7.49	2.25	4.30
19	7.20	.75	3.95	6.02	.57	3.49	7.84	2.00	4.57	8.29	2.07	4.57
20	7.55	.90	4.32	6.25	.59	3.55	7.90	1.87	4.84	8.35	2.13	4.93
21	7.60	.95	4.13	6.97	.92	3.98	8.24	1.86	5.11	8.74	1.43	4.73
22	7.90	1.20	4.41	7.46	1.10	4.26	8.70	2.05	5.16	8.87	1.21	4.85
23	8.10	1.25	4.54	8.02	1.77	4.73	8.77	1.47	4.93	9.09	1.25	5.15
24	7.95	1.45	4.64	8.23	1.77	4.92	8.69	1.44	5.12	9.47	1.84	5.50
25	8.05	1.65	4.89	8.62	2.07	5.19	9.38	1.65	5.38	9.33	1.95	5.57
26	8.25	1.75	4.80	8.72	1.73	5.08	9.13	1.67	5.25	8.86	1.92	5.45
27	8.20	1.75	4.84	8.68	1.50	4.92	8.61	1.54	5.03	8.21	1.90	5.19
28	8.40	2.00	4.86	8.58	1.46	4.89	8.16	1.63	4.92	7.25	1.42	4.61
29	---	---	---	8.53	1.28	4.86	7.37	1.74	4.75	6.81	.92	3.89
30	---	---	---	8.00	1.32	4.58	7.17	1.69	4.[illegible]	7.06	1.00	3.60
31	---	---	---	7.40	1.45	4.50	---	---	---	7.44	1.43	3.73
MONTH	11.25	.75	5.07	9.30	.57	4.48	9.38	.99	4.79	9.47	.84	4.59

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.84	1.26	3.97	7.70	1.15	4.15	6.70	-0.02	3.28	7.57	.71	4.37
2	7.89	1.43	4.44	7.82	.91	4.15	6.92	.07	3.49	7.76	.64	4.17
3	8.20	1.27	4.38	7.74	.61	3.97	7.07	.17	3.62	7.34	.27	3.84
4	7.84	.64	4.14	7.49	.42	3.89	7.10	.07	3.58	7.30	.47	3.93
5	7.93	.84	4.33	7.43	.24	3.84	6.90	-0.20	3.38	7.26	.55	3.95
6	8.00	.97	4.54	7.40	.57	4.08	6.50	-0.47	3.15	7.61	.83	4.20
7	7.80	.86	4.36	7.33	.58	4.02	6.20	-0.33	3.18	7.84	.95	4.39
8	7.56	.90	4.41	7.00	.44	3.82	6.76	.32	3.63	7.88	1.39	4.48
9	7.91	1.62	4.77	6.55	.25	3.62	6.78	.52	3.62	8.47	1.77	5.09
10	7.26	1.61	4.70	6.54	.63	3.80	6.68	.69	3.47	7.71	1.81	4.68
11	6.85	1.89	4.66	6.53	.38	3.81	6.99	.86	3.60	7.41	1.01	4.12
12	6.87	1.92	4.47	6.78	1.00	3.72	6.96	.97	3.63	7.68	.79	4.04
13	6.90	1.82	4.32	7.00	1.42	3.77	6.96	.26	3.29	7.86	.47	4.11
14	7.07	1.95	4.13	7.32	1.26	3.77	7.45	-0.11	3.25	7.96	.72	4.24
15	7.33	1.93	4.01	7.51	1.21	3.80	7.75	.08	3.67	8.40	1.18	4.54
16	7.62	1.68	4.01	7.58	.28	3.64	8.04	.14	3.89	8.05	.68	4.27
17	7.99	1.31	4.06	7.52	.10	3.51	8.22	.08	3.88	7.95	.68	4.33
18	8.11	1.17	4.26	7.92	.33	3.89	8.13	.08	4.01	7.88	.67	4.23
19	8.41	.70	4.27	8.32	.36	4.11	8.17	.26	4.19	7.78	.62	4.18
20	8.89	1.07	4.78	8.54	.37	4.30	7.82	.03	4.07	7.82	.88	4.34
21	9.27	1.11	4.94	8.54	.45	4.54	7.70	.32	4.10	7.72	1.00	4.33
22	9.20	1.07	5.00	8.54	.75	4.77	7.59	.52	4.11	7.23	1.04	4.27
23	8.86	.78	4.87	8.03	.46	4.41	7.63	.81	4.10	6.58	1.18	3.98
24	8.38	.94	4.74	7.72	.56	4.24	7.60	1.16	4.33	6.02	.88	3.61
25	7.58	.60	4.29	7.58	.88	4.16	6.94	1.39	4.03	6.10	.69	3.42
26	7.35	.83	4.10	7.31	.86	3.94	6.48	.88	3.57	6.41	1.03	3.43
27	7.37	1.06	3.96	7.07	1.25	3.70	6.30	.89	3.37	6.48	.94	3.72
28	7.60	1.53	3.99	6.74	1.03	3.58	6.49	1.99	3.67	6.47	.38	3.63
29	7.58	1.64	4.06	6.51	.56	3.25	6.68	.20	3.43	6.67	.55	3.68
30	7.67	1.33	4.03	6.45	.02	2.98	6.87	.49	3.69	7.13	.88	3.86
31	---	---	---	6.50	-0.22	3.00	7.13	.51	3.86	---	---	---
MONTH	9.27	.60	4.37	8.54	-0.22	3.88	8.22	-0.47	3.68	8.47	.27	4.13
YEAR	12.10	-0.47	4.57									

14247400 COLUMBIA RIVER AT BRADWOOD, OR

LOCATION.--Lat 46°11'45", long 123°25'50", in SW¼NE¼ sec.9, T.8 N., R.6 W., Clatsop County, Hydrologic Unit 17080003, at Bradwood, and at mile 38.9 (62.6 km).

DRAINAGE AREA.--257,100 mi² (665,900 km²).

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1976 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 22.5°C Aug. 12, 16, 17, 1977; minimum, 2.5°C on several days in 1977 and Jan. 5, 6, 1978.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 21.5°C Aug. 8-15; minimum, 2.5°C Jan. 5, 6.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER-ATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CHLORO-PHYLL A PHYTO-PLANK-TON, UNCORR. (UG/L)	CHLORO-PHYLL B PHYTO-PLANK-TON, UNCORR. (UG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)
OCT 11...	1115	15.5	8.0	9.5	155	--	--	.614	.529	9
NOV 16...	1115	10.5	7.5	11.0	154	120	150	6.50	.806	20
JAN 26...	1100	5.3	7.3	13.0	136	600	300	3.24	2.45	12
FEB 03...	1100	5.3	7.9	12.2	165	58	170	1.65	.000	2
14...	1200	4.8	7.4	12.5	142	53	K14	--	--	7
MAR 16...	1100	6.2	7.7	12.1	169	67	80	4.03	.000	4
APR 14...	1200	9.8	7.7	11.9	170	K75	K5	.000	.000	13
MAY 17...	1100	12.3	7.9	11.3	132	190	K10	6.64	.845	22
JUN 08...	1200	16.8	7.9	11.4	121	410	K2	20.7	.000	10
JUL 12...	1130	17.9	8.1	8.0	115	K270	K2	15.0	1.78	11
AUG 18...	1300	20.4	8.1	8.6	130	K19	K8	7.54	.509	26
SEP 20...	1200	17.0	7.4	9.5	140	K18	K5	--	--	14

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)
OCT 11...	8.4	.09	.03	.07	.10	.19	.04	1.8	85	6
NOV 16...	10	.23	.04	.06	.10	.33	.06	2.6	74	20
JAN 26...	16	.40	.04	.23	.27	.67	.03	2.6	85	39
FEB 03...	14	.41	.02	.15	.17	.58	.07	--	104	20
14...	14	.39	.08	.07	.15	.54	.07	2.4	100	32
MAR 16...	13	.42	.03	.10	.13	.55	.10	2.1	86	13
APR 14...	15	.33	.08	.43	.51	.84	.06	2.0	102	19
MAY 17...	12	.12	.03	.60	.63	.75	.08	3.0	89	31
JUN 08...	8.2	.00	.01	.51	.52	.52	.02	4.3	75	71
JUL 12...	7.5	.00	.00	.26	.26	.26	.04	3.1	66	54
AUG 18...	8.5	.05	.05	.38	.43	.48	.04	2.1	76	7
SEP 20...	9.0	.11	.03	.32	.35	.46	.04	2.0	86	7

14247400 COLUMBIA RIVER AT BRADWOOD, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SELE-NIUM, TOTAL (UG/L AS SE)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)
OCT 11...	2	<10	5	10	230	<100	30	0	.0
NOV 16...	2	3	4	18	950	7	20	0	.0
JAN 26...	2	4	10	14	1100	34	30	1	.0
FEB 03...	1	--	0	16	640	24	30	0	.1
14...	2	0	0	63	920	19	70	0	.2
MAR 16...	1	0	0	10	530	2	40	0	.0
APR 14...	1	6	0	17	1100	33	40	0	.5
MAY 17...	1	4	0	60	900	14	60	0	.1
JUN 08...	2	2	0	20	720	8	40	0	.0
JUL 12...	0	--	0	13	810	--	10	0	.0
AUG 18...	2	2	0	25	580	12	30	0	.0
SEP 20...	1	--	10	41	750	--	40	0	.0

DATE	TIME	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA)	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	OIL AND GREASE (MG/L)
OCT 11...	1115	14	4.3	6.4	1.0	54	12	4.9	0
NOV 16...	1115	11	4.4	7.6	1.2	50	3.4	5.3	0
JAN 26...	1100	14	4.5	6.1	1.2	48	10	3.5	--
FEB 03...	1100	16	5.5	8.7	1.6	59	13	6.7	0
14...	1200	--	--	--	--	--	--	--	0
APR 14...	1200	18	5.6	8.5	1.6	63	13	5.1	0
JUL 12...	1130	13	3.6	5.0	1.1	39	7.7	3.1	0

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.5	16.0	12.5	12.5	8.0	7.5	4.0	3.5	5.0	5.0	6.0	6.0
2	16.0	16.0	12.5	12.5	8.0	7.5	4.0	3.5	5.0	5.0	6.0	5.5
3	16.0	15.5	12.5	12.0	8.0	8.0	3.5	3.5	5.5	5.0	6.0	5.5
4	15.5	15.5	12.0	11.5	8.0	8.0	3.0	3.0	5.5	5.5	5.5	5.5
5	15.5	15.0	11.5	11.5	8.0	7.5	2.5	2.5	5.5	5.5	5.5	5.5
6	15.0	15.0	11.5	11.0	8.0	7.5	3.0	2.5	6.0	5.5	5.5	5.5
7	15.0	15.0	11.0	11.0	7.5	7.5	3.5	3.0	6.5	6.0	5.5	5.5
8	15.0	14.5	11.0	10.5	7.5	7.0	4.5	3.5	6.0	6.0	6.0	5.5
9	14.5	14.5	11.0	10.5	7.0	7.0	5.0	4.5	6.0	6.0	6.0	5.5
10	14.5	14.5	11.0	11.0	7.0	6.5	5.5	5.0	6.0	6.0	6.5	6.0
11	15.0	14.5	11.0	11.0	6.5	6.5	5.5	5.5	6.0	5.5	6.5	6.0
12	15.0	14.5	11.0	11.0	6.5	6.5	5.5	5.5	6.0	5.5	6.5	6.0
13	15.0	15.0	11.0	11.0	7.0	6.5	5.5	5.0	5.5	5.5	6.5	6.0
14	15.0	14.5	11.0	11.0	7.5	7.0	5.0	5.0	5.5	5.0	6.5	6.0
15	15.0	14.5	11.0	10.5	8.0	7.0	5.0	5.0	5.0	5.0	6.5	6.5
16	15.0	14.5	10.5	10.5	7.5	7.5	5.0	5.0	5.0	5.0	6.5	6.0
17	14.5	14.0	10.5	10.5	8.0	7.5	5.5	5.0	5.0	5.0	7.0	6.5
18	14.5	14.0	10.5	10.0	7.5	7.0	5.5	5.0	5.0	5.0	7.0	6.5
19	14.5	14.0	9.5	9.0	7.0	6.5	5.5	5.0	5.5	5.0	7.5	7.0
20	14.5	14.0	9.0	8.5	6.5	6.0	5.5	5.0	5.5	5.5	7.5	7.0
21	14.5	14.0	9.5	8.0	6.0	5.5	5.5	5.5	6.0	5.5	7.5	7.5
22	14.5	14.0	8.0	7.5	5.5	5.0	5.5	5.5	6.0	6.0	7.5	7.5
23	14.0	14.0	7.5	6.5	5.0	4.5	5.5	5.5	6.0	6.0	8.0	7.5
24	14.5	14.0	6.5	6.5	4.5	4.5	5.5	5.5	6.0	6.0	7.5	7.5
25	14.5	14.0	7.0	6.5	5.0	5.0	5.5	5.5	6.0	6.0	8.0	7.5
26	14.0	14.0	6.5	6.5	5.0	5.0	5.5	5.5	6.0	6.0	8.0	8.0
27	14.0	13.5	7.0	6.5	5.0	5.0	5.5	5.0	6.0	6.0	8.5	8.0
28	13.5	13.5	7.5	7.0	5.0	4.5	5.0	5.0	6.0	6.0	8.5	8.5
29	13.5	13.5	8.0	7.5	4.5	4.5	5.0	5.0	---	---	9.0	8.5
30	13.5	13.0	8.0	8.0	4.5	4.0	5.0	5.0	---	---	9.0	9.0
31	13.0	12.5	---	---	4.0	4.0	5.0	5.0	---	---	9.0	9.0
MONTH	16.5	12.5	12.5	6.5	8.0	4.0	5.5	2.5	6.5	5.0	9.0	5.5

14247400 COLUMBIA RIVER AT BRADWOOD, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	9.0	11.0	10.5	15.0	14.5	17.5	17.5	20.0	20.0	20.0	20.0
2	9.0	9.0	11.0	11.0	15.5	15.0	17.5	17.5	20.0	20.0	20.0	20.0
3	9.0	9.0	11.0	11.0	15.5	15.5	17.5	17.5	20.0	20.0	20.0	19.5
4	9.5	9.0	11.0	11.0	16.0	15.5	17.5	17.5	20.0	20.0	19.5	19.5
5	9.5	9.0	11.0	11.0	16.5	16.0	17.5	17.0	20.5	20.0	19.5	19.5
6	9.5	9.0	11.5	11.0	16.5	16.5	17.0	17.0	20.5	20.5	19.5	19.5
7	9.5	9.0	12.0	11.5	17.0	16.5	17.5	17.0	21.0	20.5	19.5	19.0
8	10.0	9.5	12.0	11.5	16.5	16.5	17.5	17.5	21.5	21.0	19.0	19.0
9	10.0	9.5	12.0	12.0	16.5	16.5	17.5	17.5	21.5	21.0	19.0	19.0
10	10.0	10.0	12.0	12.0	16.5	16.5	18.0	17.5	21.5	21.5	19.0	19.0
11	10.0	10.0	12.5	12.0	16.5	16.0	18.0	18.0	21.5	21.5	19.0	18.0
12	10.0	10.0	12.5	12.5	16.0	16.0	18.0	18.0	21.5	21.5	18.0	18.0
13	10.0	9.5	12.5	12.5	16.5	16.0	18.0	18.0	21.5	21.5	18.5	18.0
14	9.5	9.5	12.5	12.5	16.5	16.5	18.5	18.0	21.5	21.5	18.5	18.5
15	9.5	9.5	12.5	12.0	16.5	16.5	18.5	18.5	21.5	21.0	18.5	18.5
16	9.5	9.5	12.5	12.5	16.5	16.5	18.5	18.5	21.0	21.0	18.5	18.5
17	9.5	9.5	12.5	12.5	16.5	16.0	18.5	18.5	21.0	21.0	18.5	18.0
18	9.5	9.5	13.0	12.5	17.0	16.5	19.0	18.5	20.5	20.5	18.0	18.0
19	9.5	9.5	13.5	13.0	17.0	16.5	19.0	19.0	20.5	20.0	18.0	17.5
20	10.0	9.5	14.0	13.5	17.0	17.0	19.0	19.0	20.0	20.0	17.5	17.5
21	10.0	10.0	14.0	14.0	17.0	17.0	19.5	19.0	20.0	20.0	17.0	17.0
22	10.0	10.0	14.0	13.5	17.0	17.0	20.0	19.5	20.0	20.0	17.0	17.0
23	10.5	10.0	13.5	13.5	17.0	17.0	20.5	20.0	20.0	20.0	17.0	17.0
24	10.5	10.0	13.5	13.5	17.0	17.0	20.5	20.5	20.0	19.5	17.0	17.0
25	10.5	10.5	13.5	13.5	17.0	17.0	20.5	20.5	19.5	19.5	17.0	16.5
26	10.5	10.5	13.5	13.5	17.0	17.0	21.0	21.0	19.5	19.0	17.5	17.0
27	10.5	10.5	13.5	13.5	17.0	17.0	21.0	21.0	19.0	19.0	17.0	17.0
28	10.5	10.5	14.0	13.5	17.5	17.0	21.0	20.5	19.0	19.0	17.5	17.0
29	10.5	10.5	14.0	14.0	17.5	17.5	20.5	20.5	19.5	19.5	17.5	17.0
30	10.5	10.5	14.5	14.0	17.5	17.5	20.5	20.5	20.0	20.0	17.5	17.5
31	---	---	14.5	14.5	---	---	20.5	20.0	20.0	20.0	---	---
MONTH	10.5	9.0	14.5	10.5	17.5	14.5	21.0	17.0	21.5	19.0	20.0	16.5

14248600 COLUMBIA RIVER AT ALTOONA, WA

LOCATION.—Lat 46°15'53", long 123°39'13", in SW¼NE¼ sec.15, T.19 N., R.8 W., Wahkiakum County, Hydrologic Unit 17080006, temperature recorder on right bank, on Bumblebee Canning Company dock, at Altoona, and at mile 24.1 (38.8 km).

DRAINAGE AREA.—258,000 mi² (668,200 km²), approximately.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: October 1971 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: Maximum, 23.0°C Aug. 11-13, 16-20, 22, 1977; minimum, 0.5°C Jan. 11, 12, 1974.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum, 22.5°C Aug. 8, 9; minimum, 3.0°C Jan. 6.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	16.5	13.0	12.5	8.5	8.0	4.5	4.0	5.0	5.0	---	---
2	17.0	16.0	12.5	12.0	8.5	8.0	4.5	4.0	5.0	5.0	---	---
3	16.5	14.0	12.0	12.0	8.5	8.5	4.5	4.0	5.0	5.0	---	---
4	16.5	16.0	12.0	11.5	8.5	8.5	4.5	4.0	5.5	5.0	---	---
5	16.0	15.5	11.5	11.0	8.0	8.0	4.0	3.5	5.5	5.5	---	---
6	15.5	15.5	11.0	11.0	8.0	8.0	3.5	3.0	5.5	5.5	---	---
7	16.0	15.5	11.0	10.5	8.0	7.5	4.0	3.5	6.0	5.5	---	---
8	15.5	15.5	10.5	10.5	7.5	7.5	4.5	3.5	6.0	6.0	5.5	5.0
9	15.5	15.0	10.5	10.5	7.5	7.0	5.0	4.5	6.0	6.0	6.0	5.0
10	15.0	15.0	10.5	10.5	7.0	7.0	5.0	5.0	6.0	5.5	6.0	5.0
11	15.0	14.5	10.5	10.5	7.5	7.0	5.5	5.0	6.0	5.5	6.5	5.5
12	15.0	15.0	10.5	10.5	7.0	7.0	5.5	5.0	5.5	5.0	6.5	5.5
13	15.5	15.0	11.0	10.5	7.5	7.5	5.0	5.0	5.0	5.0	6.5	5.5
14	15.0	15.0	10.5	10.5	8.0	7.5	5.0	5.0	5.0	4.5	7.0	5.5
15	15.5	15.0	10.5	10.5	8.0	8.0	5.0	5.0	5.0	4.5	6.5	5.5
16	15.5	15.0	10.5	10.0	8.0	7.5	5.0	5.0	4.5	4.5	6.5	5.5
17	15.0	14.5	10.0	10.0	8.0	7.5	5.0	5.0	4.5	4.5	7.0	5.5
18	14.5	14.5	10.0	9.5	7.5	7.5	5.0	5.0	4.5	4.5	7.0	6.0
19	15.0	14.5	9.5	9.0	7.5	7.0	5.0	5.0	5.0	4.5	7.0	6.5
20	14.5	14.0	9.0	8.0	7.0	6.5	5.0	4.5	5.0	5.0	7.5	7.0
21	14.5	14.0	8.0	7.5	6.5	6.5	5.5	5.0	5.5	5.0	7.5	7.0
22	14.5	14.0	7.5	7.0	6.5	6.0	5.5	5.0	6.0	5.5	7.5	7.0
23	14.5	14.0	7.5	7.0	6.0	5.5	5.5	5.5	6.0	5.5	8.0	7.5
24	14.0	14.0	7.0	6.5	5.5	5.5	5.5	5.0	6.0	5.5	8.0	7.5
25	14.0	14.0	7.0	6.5	6.0	5.5	5.0	5.0	6.0	5.5	7.5	7.5
26	14.0	14.0	7.5	7.0	5.5	5.5	5.0	4.5	6.5	6.0	8.0	7.5
27	14.0	13.5	8.0	7.5	5.5	5.0	5.0	4.5	6.0	5.5	8.0	7.5
28	14.0	13.5	8.0	8.0	5.5	5.0	5.0	5.0	6.0	5.5	8.5	8.0
29	13.5	13.0	8.5	8.0	5.5	5.0	5.0	5.0	---	---	9.0	8.5
30	13.5	13.0	8.0	8.0	5.0	5.0	5.0	4.5	---	---	9.5	9.0
31	13.0	13.0	---	---	5.0	4.5	5.0	5.0	---	---	9.5	9.0
MONTH	17.0	13.0	13.0	6.5	8.5	4.5	5.5	3.0	6.5	4.5	9.5	5.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	9.0	11.0	10.5	15.5	14.5	18.5	17.5	20.5	20.0	20.0	19.5
2	9.0	8.5	11.0	11.0	15.5	15.0	18.0	17.5	21.0	20.0	20.5	19.5
3	9.0	9.0	11.0	10.5	16.0	15.5	18.0	18.0	21.0	20.0	20.0	19.5
4	9.5	9.0	11.0	10.5	16.5	15.5	17.5	17.5	21.0	20.0	19.5	19.5
5	9.5	9.0	11.0	10.5	17.0	16.0	18.0	17.5	21.0	20.0	19.5	19.0
6	9.5	9.0	11.5	11.0	17.5	16.5	18.0	17.5	21.5	20.0	19.5	19.0
7	10.0	9.0	12.0	11.0	17.5	17.0	17.5	17.0	22.0	20.5	19.5	19.0
8	10.0	9.0	12.5	11.5	17.5	16.5	18.0	17.5	22.5	21.5	19.0	18.5
9	10.5	9.0	12.5	12.0	17.0	16.5	18.5	17.5	22.5	21.5	18.5	18.5
10	10.5	9.5	12.5	12.0	17.0	16.5	19.0	17.5	21.5	21.0	18.5	18.0
11	10.5	9.5	13.0	12.0	17.0	16.0	19.0	18.0	21.5	21.0	18.5	18.0
12	11.0	9.5	12.0	12.0	16.5	16.0	19.5	18.0	22.0	21.5	18.5	18.0
13	10.5	10.0	12.0	12.0	16.5	16.0	19.5	18.5	22.0	21.0	18.5	18.0
14	10.0	9.5	12.0	12.0	17.0	16.0	19.5	16.5	21.5	21.0	18.5	18.0
15	9.5	9.0	13.0	12.0	16.5	16.5	19.0	19.0	21.5	21.0	18.5	18.0
16	9.5	9.0	12.5	12.0	16.5	16.0	19.0	18.5	21.5	21.0	18.5	18.0
17	9.5	9.5	12.5	12.0	17.0	16.0	19.0	18.5	21.0	20.0	18.0	17.5
18	9.5	9.5	13.0	12.5	17.0	16.5	19.5	18.5	21.0	20.5	18.0	17.5
19	9.5	9.5	13.5	12.5	17.5	16.5	20.0	19.0	21.0	20.0	18.0	17.5
20	10.0	9.0	14.0	13.0	18.0	17.0	20.0	19.0	20.5	20.0	17.5	17.0
21	10.0	9.5	14.0	13.5	17.5	17.0	20.5	19.5	20.0	19.5	17.0	16.5
22	10.0	9.5	14.0	13.5	17.5	17.0	21.0	20.0	20.0	20.0	17.0	16.5
23	10.0	9.5	14.0	13.5	18.0	17.0	21.0	20.0	20.0	19.5	17.0	16.5
24	10.5	9.5	14.0	13.5	17.5	17.0	21.5	20.0	20.0	19.5	17.5	16.5
25	10.5	10.0	13.5	13.5	17.5	17.0	22.0	20.5	20.0	19.0	17.5	16.5
26	10.5	10.0	13.5	13.5	18.0	17.0	21.5	21.0	20.0	19.0	17.0	17.0
27	11.0	10.0	13.5	13.5	18.0	16.5	21.0	21.0	20.0	19.5	17.5	17.0
28	11.0	10.5	14.0	13.5	18.5	17.5	21.5	20.5	20.0	19.0	17.5	17.0
29	11.0	10.5	14.5	13.5	18.0	17.5	21.5	20.5	20.0	19.5	17.5	17.0
30	11.0	10.5	15.0	13.5	18.5	18.0	21.5	20.5	20.0	19.0	17.5	17.0
31	---	---	15.0	14.0	---	---	21.0	20.5	20.0	19.5	---	---
MONTH	11.0	8.5	15.0	10.5	18.5	14.5	22.0	17.0	22.5	19.0	20.5	16.5

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR
(National stream-quality accounting network station)

LOCATION.--Lat 45°42'15", long 123°45'15", in NW¼ sec.35, T.3 N., R.9 W., Tillamook County, Hydrologic Unit 17100202, on right bank 0.2 mi (0.3 km) upstream from Cook Creek, 2.2 mi (3.5 km) northeast of Foss, and at mile 13.5 (21.7 km).

DRAINAGE AREA.--667 mi^2 (1,728 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 32.60 ft (9.936 m) National Geodetic Vertical Datum of 1929 (State Highway Department bench mark). Prior to Nov. 11, 1939, nonrecording gage.

REMARKS.--Water-discharge records good. No regulation. Several small diversions for irrigation and domestic use above station.

AVERAGE DISCHARGE.--39 years, 2,749 ft^3/s (77.85 m^3/s), 55.97 in/yr (1,422 mm/yr), 1,992,000 acre-ft/yr (2.46 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,900 ft^3/s (1,328 m^3/s) Jan. 20, 1972, gage height, 23.11 ft (7.044 m); minimum, 34 ft^3/s (0.96 m^3/s) Aug. 29-31, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 19,000 ft^3/s (538 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 2	1530	33,200	940	19.35	5.898	Dec. 13	2000	*35,200	997	*19.70	6.005

Minimum, 120 ft^3/s (3.40 m^3/s) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	948	6690	6220	1690	3580	3020	2080	1930	995	367	167	175
2	872	9050	22000	1590	6370	2680	2040	1730	917	367	160	207
3	783	6530	19600	1950	7280	2430	2170	1590	857	362	152	253
4	704	4680	14900	4600	6140	2260	2140	1500	797	356	148	384
5	634	3700	9520	6310	5110	2060	2630	1490	747	345	145	378
6	593	3010	9070	8040	5070	1890	2770	1360	697	329	141	356
7	648	2720	9110	7090	5820	1970	2560	1240	655	313	138	318
8	627	2360	7820	6700	7330	2230	2280	1130	627	302	131	292
9	579	2080	6660	6580	8050	2270	2050	1060	648	292	127	559
10	559	2770	7090	6040	7520	2040	1860	1010	718	282	120	1920
11	506	2870	11800	5150	6250	1930	1720	1240	711	282	124	1970
12	462	2790	13700	4600	5140	1870	1590	1440	683	282	141	1450
13	437	3200	27400	4640	4290	1830	1490	2570	676	272	145	1010
14	413	6380	31300	5890	3660	1850	1430	4370	725	262	138	827
15	390	8900	30400	6100	3340	1770	1400	5140	725	253	163	725
16	373	7990	25700	5650	3010	1660	1450	4580	690	292	175	627
17	356	6190	18800	5200	2750	1580	1550	3770	641	313	175	593
18	339	4890	12900	4830	2510	1500	1670	3090	593	318	163	648
19	329	3910	9340	4660	2330	1410	1740	2580	559	297	167	620
20	318	3190	7230	4460	2170	1340	1890	2180	519	267	171	586
21	313	2680	5820	4800	2020	1270	2310	1880	493	243	199	552
22	307	2350	4730	5410	1880	1220	4500	1700	481	221	191	641
23	419	2350	3960	5400	1760	1250	5820	1540	468	207	207	910
24	600	3690	3430	4870	1730	1670	5010	1460	456	195	323	857
25	1030	11400	3040	4270	3090	4150	4010	1440	443	191	318	747
26	1210	14900	2700	3750	3910	4420	3400	1370	437	187	282	655
27	1040	11100	2410	3260	3800	3660	2990	1400	419	191	282	586
28	948	7740	2200	2900	3420	3190	2670	1420	402	195	243	532
29	1480	7610	2090	2630	---	2850	2370	1290	378	187	212	493
30	4250	6600	1960	2370	---	2520	2130	1170	367	187	187	468
31	4610	---	1820	2440	---	2270	---	1080	---	179	179	---
TOTAL	27077	164320	334720	143870	119330	68060	73720	60750	18524	8336	5614	20339
MEAN	873	5477	10800	4641	4262	2195	2457	1960	617	269	181	678
MAX	4610	14900	31300	8040	8050	4420	5820	5140	995	367	323	1970
MIN	307	2080	1820	1590	1730	1220	1400	1010	367	179	120	175
CFSM	1.31	8.21	16.2	6.96	6.39	3.29	3.68	2.94	.93	.40	.27	1.02
IN.	1.51	9.16	18.67	8.02	6.66	3.80	4.11	3.39	1.03	.46	.31	1.13
AC-FT	53710	325900	663900	285400	236700	135000	146200	120500	36740	16530	11140	40340

CAL YR 1977 TOTAL 882381 MEAN 2417 MAX 31300 MIN 59 CFSM 3.62 IN 49.21 AC-FT 1750000
WTR YR 1978 TOTAL 1044660 MEAN 2862 MAX 31300 MIN 120 CFSM 4.29 IN 58.26 AC-FT 2072000

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR—Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: December 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 24.5°C Aug. 12, 1977; minimum, 0.0°C Jan. 8-10, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 24.0°C July 25; minimum recorded, 3.0°C Jan. 1, 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	TEMPERATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT 12...	0815	500	10.2	7.1	10.7	70	K22	40	15	5.8
NOV 02...	1030	8930	9.3	7.7	11.8	64	330	380	13	4.5
DEC 01...	1100	6080	8.0	7.4	12.4	62	94	1600	14	4.1
29...	1200	2090	5.4	7.4	12.4	58	K85	K3800	15	4.4
JAN 24...	1400	4900	6.0	7.2	13.2	55	44	360	15	4.3
FEB 16...	1200	3010	5.3	7.2	12.5	56	K10	25	15	5.0
MAR 21...	1200	1340	9.4	7.2	11.3	59	<1	265	14	5.9
APR 18...	1300	1750	9.3	7.2	11.8	60	K13	K2	14	7.5
MAY 15...	1000	5590	9.2	6.9	11.4	52	190	140	13	4.3
JUN 20...	1000	683	16.0	7.5	9.9	71	K7	260	15	5.3
JUL 13...	1000	413	18.0	7.8	9.5	76	K10	380	15	6.1
AUG 02...	1100	270	20.8	7.8	9.3	74	K5	47	14	6.4
SEP 21...	1100	725	12.4	7.4	9.8	73	66	34	15	6.6

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT 12...	1.6	6.0	.8	21	5.9	5.6	.0	--	--	.04
NOV 02...	1.3	5.1	.9	11	4.6	5.6	.0	.53	--	.09
DEC 01...	1.1	4.7	.7	12	4.2	4.7	.1	.96	--	.02
29...	1.3	4.5	.6	13	3.4	4.7	.1	.25	--	.06
JAN 24...	1.0	4.2	.6	14	2.8	4.7	.0	.02	.03	.02
FEB 16...	1.1	4.2	.6	14	4.1	4.7	.1	.12	.09	.01
MAR 21...	1.3	4.3	.7	17	4.9	4.8	.1	.19	.22	.01
APR 18...	1.1	4.5	.5	19	1.8	4.2	.0	.28	.24	.01
MAY 15...	1.2	4.6	.5	16	1.0	3.9	.0	.35	--	.00
JUN 20...	1.5	5.7	.7	21	4.7	4.7	.0	.38	.68	.00
JUL 13...	1.4	6.1	.9	24	.5	5.5	.1	.34	.37	.00
AUG 02...	1.7	6.6	1.0	24	7.9	7.0	.0	.32	.55	.00
SEP 21...	1.4	5.6	.8	21	5.5	5.0	.0	.43	.32	.03

14301000 NEHALEM RIVER NEAR FOSS, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT 12...	.22	--	.01	.02	--	--	--	21	1
NOV 02...	1.0	--	.02	.11	--	--	5.9	17	5
DEC 01...	.84	--	.01	.11	--	--	2.1	15	2
29...	.56	--	.02	.03	--	--	1.3	16	3
JAN 24...	.41	.46	.02	.03	--	--	1.5	15	1
FEB 16...	.42	.52	.02	.03	--	--	1.2	17	3
MAR 21...	.35	.58	.01	.02	--	--	1.2	20	3
APR 18...	.26	.51	.00	.01	3.7	.2	--	23	5
MAY 15...	.37	--	.01	.06	--	--	3.0	16	0
JUN 20...	.21	.89	.01	.02	--	--	1.8	19	0
JUL 13...	.11	.48	.00	.01	1.8	.9	--	21	0
AUG 02...	.10	.65	.01	.03	--	--	--	23	0
SEP 21...	.38	.73	.02	.02	--	--	2.7	22	1

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	TUR-BID-ITY (JTU)	TUR-BID-ITY (NTU)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)
OCT 12...	54	53	72.9	2	--	4	5.4	90	--
NOV 02...	48	42	1160	25	--	74	1780	79	64
DEC 01...	43	41	706	10	--	17	279	82	--
29...	50	42	282	5	--	12	68	90	--
JAN 24...	48	41	635	7	--	12	159	86	--
FEB 16...	50	43	406	4	--	6	49	87	--
MAR 21...	39	46	141	2	--	2	7.2	94	--
APR 18...	40	45	189	2	--	4	19	84	--
MAY 15...	36	38	543	--	6.0	26	392	80	--
JUN 20...	46	50	84.8	--	1.0	6	11	72	3
JUL 13...	47	50	52.4	--	1.1	--	--	--	--
AUG 02...	57	59	41.6	--	1.6	4	2.9	76	--
SEP 21...	57	53	112	--	2.4	6	12	76	--

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	IRON, DIS-SOLVED (UG/L AS FE)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	ARSENIC DIS-SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)
NOV 02...	180	3000	20	100	1	1	0	0	3
JAN 24...	60	940	0	10	0	1	0	0	1
APR 18...	130	850	0	0	2	0	300	400	1
JUL 13...	190	360	0	10	0	0	200	200	5

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)
NOV 02...	<10	5	30	0	<50	11	30	6	<100
JAN 24...	2	0	0	0	0	3	11	4	31
APR 18...	4	0	10	0	0	5	33	3	--
JUL 13...	--	0	10	0	3	4	10	--	--

DATE	SILVER, DIS-SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SELE-NIUM, TOTAL (UG/L AS SE)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)
NOV 02...	0	<10	60	40	0	0	.0	.0
JAN 24...	0	1	20	300	0	0	.0	.0
APR 18...	0	0	10	80	0	0	.0	.0
JUL 13...	0	0	10	10	0	0	.0	.0

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SIMA-ZINE TOTAL COUL-SON COND. (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)
DEC 01...	ND	ND	ND	ND	ND	ND	ND	ND
FEB 16...	ND	ND	ND	ND	ND	ND	ND	ND
MAY 15...	ND	ND	ND	ND	ND	ND	ND	ND
AUG 02...	--	ND	ND	ND	ND	ND	ND	ND

DATE	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)
DEC 01...	ND	ND	ND	ND	ND	ND	--	ND	ND
FEB 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 15...	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 02...	ND	ND	ND	ND	ND	ND	ND	ND	ND

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)
DEC 01...	ND	ND	ND	ND	ND	ND	ND	ND
FEB 16...	ND	ND	ND	ND	ND	ND	ND	ND
MAY 15...	ND	ND	ND	--	--	--	ND	ND
AUG 02...	ND	ND	--	--	--	--	ND	ND

DATE	SIMAZINE IN BOTTOM MATERIAL (UG/KG DRY SOLIDS)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
DEC 01...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 15...	--	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	ATRAZINE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)
DEC 01...	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 15...	ND	ND	ND	ND	ND	ND	--	ND	ND

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR—Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO AUGUST 1978

DATE	OCT 12,77	DEC 1,77	MAR 21,78	MAY 15,78
TIME	0815	1100	1200	1000
TOTAL CELLS/ML	120	210	850	530
DIVERSITY: DIVISION	0.8	1.3	1.2	0.0
.CLASS	0.8	1.3	1.2	0.0
..ORDER	1.8	1.5	1.9	0.0
...FAMILY	2.5	2.1	2.8	2.5
....GENUS	2.8	2.2	2.9	2.8

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...OOCYSTACEAE								
....EUTETRAMORUS	22#	18	--	-	--	-	--	-
...MICRACTINIACEAE								
....MICRACTINIUM	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	14	2	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	24	11	--	-	--	-
....SCENEDESMUS	--	-	--	-	29	3	--	-
..TETRASPORALES								
...COCCOMYXACEAE								
....ELAKATOTHRIX	--	-	--	-	--	-	--	-
...PALMELLACEAE								
....GLOEOCYSTIS	11	9	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	5	5	6	3	14	2	--	-
....MELOSIRA	38#	32	--	-	29	3	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	6	3	110	14	140#	27
....COCCONEIS	5	5	6	3	--	-	--	-
....RHOICOSPHENIA	--	-	12	6	--	-	--	-
...CYMBELLACEAE								
....AMPHORA	--	-	--	-	--	-	29	5
....CYMBELLA	5	5	6	3	86	10	--	-
...EUNOTIACEAE								
....EUNOTIA	--	-	--	-	--	-	14	3
...FRAGILARIACEAE								
....ASTERIONELLA	11	9	--	-	--	-	57	11
....HANNAEA	--	-	--	-	57	7	--	-
....SYNEDRA	5	5	--	-	--	-	72	14
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	-	6	3	43	5	43	8
...NAVICULACEAE								
....NAVICULA	--	-	--	-	--	-	100#	19
....PINNULARIA	--	-	6	3	--	-	--	-
...NITZSCHIACEAE								
....NITZSCHIA	16	14	18	9	29	3	72	14
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROCCOCCALES								
...CHROCCOCCAEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	--	-	--	-	140#	17	--	-
..HORMOGONALES								
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	290#	34	--	-
....OSCILLATORIA	--	-	120#	57	--	-	--	-
..CHROCCOCCALES								
...CHROCCOCCAEAE								
....GOMPHOSPHAERIA	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR—Continued

PHYTOPLANKTON ANALYSES. OCTOBER 1977 TO AUGUST 1978

DATE	JUN 20.78	JUL 13.78	AUG 2.78
TIME	1000	1000	1100
TOTAL CELLS/ML	59	3400	6600
DIVERSITY: DIVISION	0.0	1.6	1.2
.CLASS	0.0	1.6	1.2
..ORDER	0.0	1.9	1.4
...FAMILY	0.8	2.3	1.6
....GENUS	0.8	2.9	1.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...OOCYSTACEAE						
....EUTETRAMORUS	--	-	--	-	--	-
...MICRACTINIACEAE						
....MICRACTINIUM	--	-	--	-	440	7
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	290	8	160	2
....KIRCHNERIELLA	--	-	110	3	--	-
....OOCYSTIS	--	-	230	7	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	--	-	--	-
....SCENEDESMUS	--	-	570#	17	220	3
..TETRASPORALES						
...COCCOMYXACEAE						
....ELAKATOTHRIX	--	-	60	2	--	-
...PALMELLACEAE						
....GLOEOCYSTIS	--	-	--	-	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	--	-	710#	21	4500#	68
....MELOSIRA	--		--	-	--	-
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	90	3	220	3
....COCCONEIS	15#	25	--	-	--	-
....RHOICOSPHENIA	--	-	--	-	--	-
...CYMBELLACEAE						
....AMPHORA	--	-	--	-	--	-
....CYMBELLA	44#	75	--	-	--	-
...EUNOTIACEAE						
....EUNOTIA	--	-	--	-	--	-
...FRAGILARIACEAE						
....ASTERIONELLA	--	-	--	-	--	-
....HANNAEA	--	-	--	-	--	-
....SYNEDRA	--	-	*	0	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	--	-	45	1	54	1
....PINNULARIA	--	-	--	-	--	-
...NITZSCHIACEAE						
....NITZSCHIA	--	-	60	2	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	120	4	--	-
....ANACYSTIS	--	-	990#	29	980	15
..HORMOGONALES						
...OSCILLATORIACEAE						
....LYNGBYA	--	-	--	-	--	-
....OSCILLATORIA	--	-	--	-	--	-
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....GOMPHOSPHAERIA	--	-	110	3	--	-
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	--	-	54	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

14301000 NEHALEM RIVER NEAR FOSS, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LENGTH OF EXPO-SURE (DAYS)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)
OCT					
12...	--	--	--	5.85	1.83
APR					
18...	27	.709	1.02	.920	.240

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1			---	---	9.5	8.0	4.0	3.0	6.5	5.5	7.0	6.0
2			---	---	10.5	9.0	3.5	3.0	7.5	6.5	6.0	5.0
3			---	---	11.0	9.0	5.0	3.5	8.0	7.0	6.0	5.0
4			---	---	10.5	8.0	5.5	4.5	8.5	7.5	6.0	5.5
5			---	---	8.0	8.0	6.5	5.0	8.5	8.0	6.0	5.5
6			---	---	8.5	8.0	6.5	5.0	8.0	8.0	6.0	5.0
7			---	---	8.0	7.0	6.5	5.5	8.0	8.0	7.5	6.0
8			---	---	7.0	6.5	7.5	6.5	8.0	7.5	8.5	6.5
9			---	---	6.5	6.5	7.5	7.5	7.5	6.5	8.5	7.5
10			---	---	8.0	6.0	7.5	7.5	6.5	6.0	8.0	7.0
11			---	---	8.5	8.0	7.5	7.0	6.0	5.0	8.0	7.5
12			---	---	9.0	8.5	7.5	7.0	5.5	5.0	7.5	7.0
13			---	---	10.0	9.0	8.0	7.5	6.0	5.0	7.5	6.5
14			---	---	9.5	9.0	8.0	7.5	5.5	5.5	7.5	6.5
15			9.5	---	9.0	8.5	7.5	7.5	5.5	5.0	7.5	6.0
16			9.0	8.0	8.5	8.0	8.0	7.0	5.5	5.0	8.0	6.0
17			8.5	6.5	8.5	7.5	8.0	7.5	6.0	5.0	9.0	7.0
18			7.0	5.5	7.5	7.0	8.0	7.5	6.5	5.5	9.5	7.5
19			6.5	5.5	7.0	6.5	8.0	7.5	8.0	5.5	9.5	8.5
20			5.5	4.5	6.5	6.0	8.5	8.0	8.0	7.5	10.0	8.5
21			4.5	3.5	6.5	5.5	8.5	8.0	8.5	8.0	10.0	9.0
22			4.5	3.5	6.5	6.0	8.0	6.5	9.0	8.5	11.0	9.5
23			5.0	4.0	6.5	5.5	7.0	6.5	9.0	8.5	10.5	10.0
24			6.0	5.0	7.0	6.0	6.5	5.5	9.0	8.5	10.0	9.0
25			10.0	6.5	7.0	6.5	6.5	5.5	8.5	8.0	9.5	9.0
26			10.0	8.0	7.0	6.0	6.5	5.5	8.5	7.5	10.0	9.0
27			8.5	8.0	6.0	5.5	6.5	5.5	8.0	.5	10.0	9.5
28			9.0	8.5	6.0	5.5	7.0	5.5	7.5	7.0	10.5	10.0
29			9.0	8.0	6.0	5.5	6.5	6.0	---	---	11.0	9.5
30			8.0	7.5	6.0	5.5	6.5	5.0	---	---	10.5	10.0
31			---	---	6.0	4.5	6.5	6.0	---	---	10.0	9.0
MONTH			10.0	3.5	11.0	4.5	8.5	3.0	9.0	5.0	11.0	5.0

14301000 NEHALEM RIVER NEAR FOSS, OR—Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.0	9.0	11.0	10.0	16.5	13.0	18.0	16.0	23.5	20.0	19.0	17.5
2	9.0	8.5	11.5	10.0	17.0	14.5	17.0	15.5	22.5	20.5	19.0	16.5
3	10.0	8.5	11.0	10.0	17.5	15.5	17.0	15.0	22.5	20.0	18.5	16.5
4	10.0	8.5	10.5	10.0	19.0	16.5	17.5	15.0	22.5	20.0	16.5	15.5
5	9.0	8.5	10.5	9.0	19.5	17.5	18.5	15.0	22.0	18.5	17.0	15.0
6	9.5	8.0	12.0	9.5	19.5	18.0	20.5	18.0	22.5	19.5	17.0	15.5
7	10.0	8.0	13.0	10.5	19.0	18.0	19.5	18.0	23.0	20.5	17.0	15.5
8	10.0	8.0	13.5	11.0	19.5	17.0	19.5	17.5	24.0	22.0	16.0	15.5
9	11.5	8.0	13.0	11.5	18.5	16.5	19.0	17.5	24.0	21.0	16.0	15.0
10	11.5	9.5	11.5	10.5	16.5	15.5	18.5	16.0	22.5	21.0	15.0	14.0
11	11.0	10.0	11.5	10.5	16.5	15.0	17.5	16.0	21.5	18.5	14.5	13.5
12	11.0	9.5	11.5	10.5	16.0	15.0	20.0	15.5	19.5	18.0	16.0	14.0
13	10.5	9.5	11.0	10.0	15.5	14.5	21.0	18.0	19.5	18.0	14.5	14.0
14	9.5	8.5	10.0	9.5	15.0	14.0	22.0	18.5	19.5	18.0	15.0	14.0
15	9.5	8.5	10.0	9.0	14.5	14.0	22.0	18.0	19.0	18.0	15.5	14.5
16	9.0	8.0	10.0	9.0	14.5	13.5	19.0	18.0	19.5	17.5	15.5	13.5
17	9.5	8.0	11.0	9.5	17.5	13.5	18.0	16.0	19.5	18.0	14.5	13.0
18	10.0	8.5	12.0	9.5	16.5	15.5	19.0	16.0	19.5	17.5	14.0	13.0
19	10.0	9.0	13.0	10.5	18.0	15.0	21.0	18.0	18.5	17.5	14.5	12.5
20	10.0	8.5	14.0	12.0	17.5	16.0	22.0	18.0	18.5	17.0	14.0	13.0
21	9.5	9.0	13.5	12.0	17.5	16.0	23.0	20.0	18.5	17.0	14.0	11.5
22	9.0	8.0	12.5	10.5	18.0	15.0	23.5	21.0	18.5	16.5	15.0	13.0
23	9.5	8.0	12.0	10.0	16.5	13.5	23.0	21.0	18.0	16.0	15.0	13.5
24	10.5	8.5	12.0	10.5	17.0	14.5	23.5	21.0	17.0	16.5	16.0	13.5
25	10.0	9.5	11.5	10.0	16.0	15.0	24.0	20.0	18.0	15.5	15.5	13.5
26	10.0	10.0	11.0	10.5	17.5	15.5	23.5	20.0	18.0	16.0	15.0	13.5
27	11.0	9.5	12.0	10.5	20.0	16.0	20.5	19.0	17.5	16.5	16.0	13.0
28	10.5	10.0	11.5	10.5	20.0	18.5	21.0	18.5	19.0	16.0	15.0	14.0
29	11.5	9.0	11.5	10.5	19.5	18.0	23.0	20.0	20.0	17.5	15.5	13.0
30	11.0	10.0	13.5	10.5	18.0	17.5	22.5	19.0	20.0	18.5	16.0	14.0
31	---	---	15.0	11.5	---	---	23.0	19.5	19.5	18.5	---	---
MONTH	11.5	8.0	15.0	9.0	20.0	13.0	24.0	15.0	24.0	15.5	19.0	11.5

WILSON RIVER BASIN

14301500 WILSON RIVER NEAR TILLAMOOK, OR

LOCATION.--Lat 45°29'05", long 123°41'20", in SW¼SE¼ sec.8, T.1 S., R.8 W., Tillamook County, Hydrologic Unit 17100203, on right bank 0.2 mi (0.3 km) upstream from Negro Jack Creek, 8.0 mi (12.9 km) east of Tillamook, and at mile 11.4 (18.3 km).

DRAINAGE AREA.--161 mi^2 (417 km^2), at cableway, 2.0 mi (3.2 km) downstream, where all discharge measurements are made.

PERIOD OF RECORD.--October 1914 to September 1915, August to November 1916, July 1931 to current year. Prior to January 1915 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1398: 1953. WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 71.89 ft (21.912 m) National Geodetic Vertical Datum of 1929. Dec. 18, 1914, to Nov. 4, 1916, nonrecording gage at site 2.8 mi (4.5 km) downstream at different datum. July 30, 1931, to Sept. 30, 1938, nonrecording gage at site 2.82 mi (4.54 km) downstream at datum 28.83 ft (8.787 m) lower. Oct. 1, 1938, to Oct. 17, 1968, water-stage recorder at site 2.1 mi (3.4 km) downstream at datum 29.76 ft (9.071 m) lower.

REMARKS.--Records good. No regulation. Small diversions for domestic use above station.

AVERAGE DISCHARGE.--48 years (water years 1915, 1932-78), 1,217 ft^3/s (34.47 m^3/s), 102.65 in/yr (2,607 mm/yr), 881,700 acre-ft/yr (1.09 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft^3/s (1,020 m^3/s) Jan. 20, 1972, gage height, 16.91 ft (5.154 m); maximum gage height, 20.26 ft (6.175 m) Dec. 22, 1964 (site and datum then in use); minimum discharge, 32 ft^3/s (0.91 m^3/s) Sept. 5, 1973, but may have been less for short period following a landslide Jan. 31, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1916 reached a stage of 20.8 ft (6.34 m), from floodmarks, site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft^3/s (340 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	1700	21,300	603	14.82	4.517	Dec. 13	1600	*32,000	906	*16.83	5.130
Dec. 2	1500	25,100	711	15.60	4.755						

Minimum, 82 ft^3/s (2.32 m^3/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	458	5150	2840	813	1840	1010	650	708	480	247	104	118
2	415	6430	14600	768	3100	903	703	646	448	243	103	165
3	381	3120	9180	1110	2660	841	800	596	421	234	100	206
4	348	2130	4790	2440	2070	791	827	581	395	230	100	303
5	322	1670	3160	3290	1710	725	1310	552	370	218	96	279
6	338	1390	4880	3840	1750	670	1360	507	348	210	94	232
7	899	1360	4440	2710	2140	782	1170	473	333	200	90	200
8	908	1200	3090	2830	2910	958	1020	445	320	194	87	192
9	712	1110	2360	2790	2880	837	903	436	373	187	84	439
10	600	1480	3380	2210	2360	755	804	436	404	178	83	1670
11	527	1390	5930	1790	1920	712	729	695	461	171	87	1430
12	470	1320	6360	1730	1610	683	658	813	404	167	106	918
13	433	1730	21500	1860	1390	733	623	2560	404	160	112	687
14	398	4310	13900	2190	1260	712	596	3410	486	153	99	552
15	387	5420	10800	1940	1200	674	581	2770	510	155	128	461
16	341	3730	8380	1800	1090	630	604	1970	467	185	121	401
17	328	2570	4950	1710	1010	581	716	1520	433	167	108	398
18	310	1970	3380	1690	989	552	968	1260	404	153	98	401
19	293	1580	2540	1750	948	524	1000	1050	381	145	96	362
20	281	1330	2020	1630	899	493	979	913	359	139	107	341
21	274	1150	1690	2160	832	470	1210	800	341	131	130	330
22	265	1040	1470	2400	773	451	2070	746	330	124	133	439
23	370	1280	1310	2010	716	483	2160	666	315	119	130	691
24	430	2800	1240	1680	746	742	1700	627	303	117	202	638
25	670	12600	1230	1470	1470	2350	1420	604	298	114	214	524
26	751	9400	1160	1290	1590	2010	1240	596	288	117	178	442
27	638	4910	1050	1140	1350	1390	1090	703	274	119	145	398
28	589	3360	979	1050	1160	1130	958	716	258	115	127	356
29	1030	3920	994	948	---	933	855	634	249	111	115	330
30	3730	3010	973	860	---	809	777	570	256	108	107	312
31	2930	---	894	1100	---	712	---	524	---	107	108	---
TOTAL	20826	93860	145470	56999	44373	26046	30481	29527	11113	5018	3592	14215
MEAN	672	3129	4693	1839	1585	840	1016	952	370	162	116	474
MAX	3730	12600	21500	3840	3100	2350	2160	3410	510	247	214	1670
MIN	265	1040	894	768	716	451	581	436	249	107	83	118
CFSM	4.17	19.4	29.1	11.4	9.85	5.22	6.31	5.91	2.30	1.01	.72	2.94
IN.	4.81	21.69	33.61	13.17	10.25	6.02	7.04	6.82	2.57	1.16	.83	3.28
AC-FT	41310	186200	288500	113100	88010	51660	60460	58570	22040	9950	7120	28200

CAL YR 1977 TOTAL 428645 MEAN 1174 MAX 21500 MIN 65 CFSM 7.29 IN 99.04 AC-FT 850200
WTR YR 1978 TOTAL 481520 MEAN 1319 MAX 21500 MIN 83 CFSM 8.19 IN 111.26 AC-FT 955100

14302800 MCGUIRE LAKE NEAR FAIRDALE, OR

LOCATION.—Lat 45°18'30", long 123°24'30", in NW¼SE¼ sec.15, T.3 S., R.6 W., Yamhill County, Hydrologic Unit 17100203, on control tower in reservoir on Nestucca River, 0.3 mi (0.5 km) upstream from Walker Creek, and 5.0 mi (8.0 km) southwest of Fairdale.

DRAINAGE AREA.—2.85 mi² (7.38 km²).

PERIOD OF RECORD.—October 1970 to current year.

GAGE.—Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.—Reservoir is formed by earthfill dam with ungated spillway. Capacity of reservoir is 3,840 acre-ft (4.73 hm³) between elevations 1,810.0 ft (551.69 m) and 1,865.5 ft (568.60 m). Dead storage negligible. Under normal operation, reservoir is filled in the spring (April or May) and drained when fall rains start. There is no planned storage during winter months; however, during periods of heavy runoff, inflow may be greater than capacity of outlet tunnel and there may be temporary storage. Water is used during summer months for municipal supply of city of McMinnville.

COOPERATION.—Elevation and capacity table furnished by city of McMinnville, Water and Light Department.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents observed, 3,890 acre-ft (4.80 hm³) Mar. 12, 1972, Feb. 19, Mar. 28, 1974, elevation, 1,865.8 ft (568.70 m); no contents most of time during winter months.

EXTREMES FOR CURRENT YEAR.—Maximum contents observed, 3,770 acre-ft (4.65 hm³) Mar. 23 to July 24, elevation, 1,865.0 ft (568.45 m); minimum observed, reservoir empty Jan. 1-3.

MONTHEND ELEVATION AND CONTENTS AT 0900, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30	1,859.1	2,980	-
Oct. 31	1,859.4	3,020	+40
Nov. 30	1,854.0	2,410	-610
Dec. 31	1,810.0	0	-2,410
CAL YR 1977	-	-	-168
Jan. 31	1,847.1	1,750	+1,750
Feb. 28	1,861.4	3,270	+1,520
Mar. 31	1,865.0	3,770	+500
Apr. 30	1,865.0	3,770	0
May 31	1,865.0	3,770	0
June 30	1,865.0	3,770	0
July 31	1,863.6	3,570	-200
Aug. 31	1,863.1	3,500	-70
Sept.30	1,863.8	3,600	+100
WTR YR 1978	-	-	+620

14302900 NESTUCCA RIVER NEAR FAIRDALE, OR

LOCATION.--Lat 45°18'40", long 123°25'05", in SW¼NW¼ sec.15, T.3 S., R.6 W., Yamhill County, Hydrologic Unit 17100203, on right bank 100 ft (30 m) upstream from former Meadow Lake, 0.4 mi (0.6 km) downstream from Walker Creek, 5.3 mi (8.5 km) southwest of Fairdale, and at mile 49.3 (79.3 km).

DRAINAGE AREA.--6.18 mi^2 (16.01 km^2).

PERIOD OF RECORD.--June 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,778.99 ft (542.236 m) National Geodetic Vertical Datum of 1929 (levels by city of McMinnville).

REMARKS.--Records good. Flow regulated since March 1969 by McGuire Lake about 1 mi (1.6 km) above station (see station 14302800); during winter months lake is empty except when inflow exceeds capacity of outlet tunnel.

AVERAGE DISCHARGE.--17 years (water years 1961-75, 1977-78), 32.8 ft^3/s (0.929 m^3/s), 72.08 in/yr (1,831 mm/yr), 23,760 acre-ft/yr (29.3 hm^3/yr), adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 876 ft^3/s (24.8 m^3/s) Dec. 22, 1964, gage height, 10.43 ft (3.179 m); minimum, 0.76 ft^3/s (0.022 m^3/s) Aug. 9, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 500 ft^3/s (14.2 m^3/s) Dec. 2, gage height, 7.14 ft (2.176 m); minimum, 2.4 ft^3/s (0.068 m^3/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	42	155	28	42	15	14	18	12	5.5	3.6	3.0
2	4.3	47	357	27	57	13	24	17	11	5.5	3.6	3.0
3	4.0	30	241	46	45	12	24	15	9.6	5.3	3.5	3.3
4	3.9	25	154	42	34	12	23	14	9.4	5.1	3.1	4.3
5	3.6	22	130	60	28	11	44	13	8.9	4.9	2.6	4.0
6	4.0	19	135	56	32	9.6	38	12	7.9	4.6	2.6	3.5
7	5.6	28	127	45	63	17	32	11	7.9	4.5	2.5	3.2
8	4.6	36	118	54	67	14	27	11	7.9	4.3	2.5	4.6
9	4.1	34	111	47	55	12	23	11	9.6	4.1	2.5	28
10	4.0	32	119	36	40	10	21	11	12	4.1	2.5	23
11	3.9	32	146	30	30	10	18	19	11	4.3	2.6	12
12	3.7	31	175	26	24	9.6	17	17	9.4	4.3	2.7	8.4
13	3.6	37	383	33	20	11	16	43	9.4	4.1	2.9	8.6
14	3.6	75	289	30	20	9.9	17	68	11	4.0	2.7	7.5
15	3.5	83	307	28	18	8.9	18	64	11	4.0	2.9	6.0
16	3.5	72	223	40	16	8.4	17	50	9.1	5.3	2.7	5.6
17	3.5	68	161	37	15	7.9	29	40	8.1	4.8	2.6	6.4
18	3.3	61	139	39	15	7.5	46	32	7.5	4.5	2.5	5.8
19	3.3	57	126	39	14	7.2	41	25	7.0	4.1	2.5	5.1
20	3.9	55	119	34	13	6.8	36	22	6.6	3.9	3.3	4.8
21	4.1	55	112	45	12	6.6	47	19	6.4	3.6	3.3	4.8
22	4.1	52	107	42	11	6.4	72	18	6.4	3.5	3.0	5.5
23	5.6	65	110	34	11	12	64	19	6.0	3.2	3.6	5.1
24	7.0	94	112	27	14	25	52	20	5.8	3.3	5.5	4.6
25	9.1	276	108	23	30	30	41	18	6.0	3.9	5.1	4.5
26	8.9	220	102	19	23	24	35	19	6.0	3.7	3.7	8.6
27	7.9	201	96	17	20	21	29	19	5.6	3.9	3.2	14
28	9.6	167	90	16	17	19	25	18	5.5	3.7	3.1	14
29	20	170	83	13	---	17	22	16	5.6	3.7	2.9	14
30	35	149	70	12	---	16	20	14	5.5	3.6	2.9	14
31	23	---	33	22	---	15	---	13	---	3.6	2.9	---
TOTAL	212.8	2335	4738	1047	786	404.8	932	706	245.1	130.9	95.6	239.2
MEAN	6.86	77.8	153	33.8	28.1	13.1	31.1	22.8	8.17	4.22	3.08	7.97
MAX	35	276	383	60	67	30	72	68	12	5.5	5.5	28
MIN	3.3	19	33	12	11	6.4	14	11	5.5	3.2	2.5	3.0
AC-FT	422	4630	9400	2080	1560	803	1850	1400	486	260	190	474
MEAN†	7.97	67.6	114	62.3	55.5	21.2	31.1	22.8	8.17	2.70	2.54	9.65
CFSM†	1.29	10.9	18.4	10.1	8.97	3.43	5.03	3.69	1.32	.44	.41	1.56
IN.†	1.48	12.18	21.18	11.60	9.33	3.95	5.61	4.24	1.47	.50	.47	1.74
AC-FT†	490	4,020	6,990	3,830	3,080	1,303	1,850	1,400	486	166	156	574

CAL YR 1977 TOTAL 9,530.4 MEAN 26.1 MAX 383 MIN 1.4 AC-FT 18,900 MEAN† 26.2 CFSM† 4.23 IN.† 57.39 AC-FT† 18,941
WTR YR 1978 TOTAL 11,872.4 MEAN 32.5 MAX 383 MIN 2.5 AC-FT 23,550 MEAN† 33.6 CFSM† 5.44 IN.† 73.75 AC-FT† 24,340

† Adjusted for storage and diversion by McGuire Lake.

14303600 NESTUCCA RIVER NEAR BEAVER, OR

LOCATION.--Lat 45°16'00", long 123°50'45", in SE¼NE¼ sec.36, T.3 S., R.10 W., Tillamook County, Hydrologic Unit 17100203, on right bank 150 ft (46 m) upstream from Saling Creek, 1.2 mi (1.9 km) southwest of Beaver, and at mile 13.5 (21.7 km).

DRAINAGE AREA.--180 mi² (466 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 43 ft (13 m), from river profile map.

REMARKS.--Water-discharge records good. No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--14 years, 1,128 ft³/s (31.94 m³/s), 85.10 in/yr (2,162 mm/yr), 817,200 acre-ft/yr (1.01 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft³/s (833 m³/s) Jan. 11, 1972, gage height, 22.0 ft (6.71 m), from floodmark; minimum, 32 ft³/s (0.91 m³/s) Sept. 14, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1962, reached a stage of 23.4 ft (7.13 m), discharge, 32,500 ft³/s (920 m³/s), caused by failure of Meadow Lake Dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft³/s (227 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	1700	15,000	425	14.55	4.435	Dec. 13	1700	*21,100	598	*18.16	5.535
Dec. 2	1800	20,800	589	17.99	5.483						

Minimum, 89 ft³/s (2.52 m³/s) Aug. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	464	1880	2520	687	1410	1030	477	707	465	244	115	135
2	423	2690	12200	639	1980	956	626	645	437	240	113	181
3	391	1780	10700	845	1890	822	742	630	420	236	113	213
4	361	1350	5960	1250	1640	785	721	620	403	232	110	304
5	338	1190	4000	2200	1460	721	1220	613	382	217	105	273
6	332	987	3880	3070	1450	694	1160	575	362	209	103	228
7	437	1010	3550	2410	1810	845	1020	544	352	205	100	198
8	385	896	3000	2260	2470	742	919	514	337	202	96	205
9	343	815	2560	2060	2550	680	830	508	377	191	91	526
10	315	742	2890	1780	2250	653	749	489	431	195	91	1170
11	290	680	3470	1560	1920	639	694	633	477	195	94	860
12	278	666	4180	1430	1640	613	633	607	403	188	110	613
13	266	860	15300	1490	1440	633	613	1650	403	178	115	532
14	248	2230	12900	1520	1250	607	600	2650	471	171	110	483
15	237	3430	11600	1400	1300	575	594	2470	508	168	140	414
16	231	2640	9770	1490	1170	550	613	1990	437	236	164	372
17	220	2000	5900	1500	1080	526	707	1630	403	202	137	414
18	215	1600	4130	1530	1010	501	1070	1360	377	178	115	460
19	205	1280	3150	1550	956	483	1030	1150	362	164	110	387
20	200	1070	2510	1480	904	460	995	1000	342	158	134	367
21	195	926	2060	1860	852	448	1220	889	327	149	198	362
22	192	867	1760	1980	800	437	2150	837	322	143	152	437
23	278	1110	1470	1800	749	477	2250	749	308	137	140	420
24	315	2350	1350	1600	707	569	1830	694	295	134	225	387
25	379	10800	1240	1430	749	815	1520	660	290	132	250	362
26	385	8750	1110	1300	1240	673	1330	653	286	132	210	342
27	332	4900	1000	1140	1190	613	1160	700	264	143	180	332
28	355	3330	911	1060	1100	569	1010	653	256	137	150	322
29	646	3380	896	964	---	538	874	581	248	132	130	308
30	1650	2760	889	889	---	514	785	538	248	123	120	304
31	1270	---	778	1020	---	489	---	501	---	121	130	---
TOTAL	12176	68969	137634	47194	38967	19657	30142	28440	10993	5492	4151	11911
MEAN	393	2299	4440	1522	1392	634	1005	917	366	177	134	397
MAX	1650	10800	15300	3070	2550	1030	2250	2650	508	244	250	1170
MIN	192	666	778	639	707	437	477	489	248	121	91	135
CFSM	2.18	12.8	24.7	8.46	7.73	3.52	5.58	5.09	2.03	.98	.74	2.21
IN.	2.52	14.25	28.44	9.75	8.05	4.06	6.23	5.88	2.27	1.14	.86	2.46
AC-FT	24150	136800	273000	93610	77290	38990	59790	56410	21800	10890	8230	23630

CAL YR 1977 TOTAL 371961 MEAN 1019 MAX 15300 MIN 68 CFSM 5.66 IN 76.87 AC-FT 737800
WTR YR 1978 TOTAL 415726 MEAN 1139 MAX 15300 MIN 91 CFSM 6.33 IN 85.92 AC-FT 824600

14303600 NESTUCCA RIVER NEAR BEAVER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1964 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 24.0°C July 1-3, 1967; minimum, 1.0°C sometime during period Dec. 28, 1968, to Feb. 8, 1969.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 23.5°C Aug. 8; minimum, 3.5°C Jan. 1, 2.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	9.0	11.0	10.0	10.0	9.0	5.0	3.5	8.5	8.0	7.5	6.0
2	11.0	9.0	10.0	8.5	10.5	10.0	5.0	3.5	9.0	8.5	7.5	6.0
3	10.0	8.0	8.5	7.5	10.0	9.5	7.0	5.0	9.0	8.5	8.0	6.5
4	9.5	7.5	8.5	7.5	10.0	9.0	8.0	7.0	9.5	8.5	8.5	7.0
5	10.0	8.0	9.5	8.5	9.0	8.0	8.0	7.5	9.5	9.0	9.0	7.0
6	9.5	8.5	9.5	9.0	10.0	9.0	8.0	7.5	9.0	8.5	8.5	7.5
7	11.0	9.5	9.5	8.5	9.0	7.5	8.5	8.0	9.0	8.0	9.5	8.5
8	10.5	9.5	8.5	7.0	7.5	7.0	9.0	8.5	8.0	7.5	10.0	8.5
9	10.5	9.5	9.5	8.0	8.0	7.0	9.5	9.0	8.0	7.0	10.0	8.5
10	10.5	9.0	10.5	9.5	9.5	8.0	9.0	8.5	7.0	6.0	9.0	7.0
11	10.5	8.5	10.0	9.5	9.5	9.5	8.5	8.0	6.5	5.5	8.5	8.0
12	10.5	8.5	9.5	9.0	9.5	9.0	9.0	8.5	6.5	6.0	8.5	7.0
13	12.0	10.0	10.0	9.5	10.5	9.5	9.0	8.5	8.0	6.0	9.0	7.5
14	11.0	9.0	10.5	10.0	10.0	9.5	9.0	8.5	7.5	7.0	9.0	7.0
15	11.0	9.0	10.5	10.0	9.5	8.5	9.0	8.5	7.0	6.5	8.5	6.0
16	12.0	10.0	10.0	8.5	9.5	8.5	9.0	8.5	6.5	6.0	9.5	6.5
17	10.5	9.0	8.5	7.5	9.5	8.5	9.5	9.0	8.0	6.5	11.0	7.5
18	11.0	9.5	7.5	7.0	9.5	7.5	9.0	8.5	9.0	8.0	11.0	8.0
19	11.0	9.5	6.5	6.0	7.5	7.0	9.0	8.5	10.0	8.0	11.5	8.5
20	10.0	9.0	6.0	5.0	7.0	6.5	9.5	9.0	9.5	8.5	11.5	8.5
21	11.0	9.5	6.0	5.0	8.0	7.0	9.5	8.0	10.5	9.0	11.5	9.0
22	11.0	9.5	6.0	4.5	8.0	7.5	8.0	7.0	10.0	8.5	11.5	10.5
23	12.5	11.0	7.0	6.0	6.5	7.5	7.5	6.5	10.5	9.0	11.5	10.5
24	11.5	11.0	8.5	7.0	9.0	8.5	7.0	6.0	10.0	9.5	10.5	9.5
25	11.5	10.5	10.5	8.5	9.0	8.5	8.0	7.0	9.5	9.0	11.5	9.5
26	10.5	9.5	10.0	9.5	8.5	6.0	8.0	7.0	9.0	8.5	12.5	10.0
27	9.5	8.5	10.0	9.5	6.0	5.5	8.0	6.5	8.0	7.0	11.5	10.5
28	10.0	9.0	10.0	9.0	7.0	6.0	9.0	8.0	8.5	7.5	12.0	10.5
29	10.0	9.5	10.0	9.0	7.0	7.0	8.5	7.5	---	---	12.0	10.0
30	10.0	9.0	9.0	8.0	7.5	7.0	7.5	6.5	---	---	12.0	10.0
31	10.0	9.0	---	---	7.5	5.0	8.0	7.5	---	---	11.5	8.5
MONTH	12.5	7.5	11.0	4.5	10.5	5.0	9.5	3.5	10.5	5.5	12.5	6.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.0	9.0	10.0	8.5	17.0	12.0	15.5	14.0	22.0	17.5	17.5	16.0
2	9.0	8.0	10.5	9.0	17.0	13.0	15.0	14.0	21.5	17.0	19.0	16.0
3	10.5	8.0	11.0	8.5	17.0	13.5	14.5	14.0	21.0	17.0	17.5	15.0
4	10.0	8.5	10.5	8.5	18.5	14.5	16.0	13.0	21.0	16.5	15.5	14.0
5	9.0	8.0	11.0	7.5	19.5	15.0	18.5	13.0	20.5	16.0	15.5	13.5
6	10.0	6.5	12.5	8.0	18.5	15.0	19.5	15.0	21.0	16.0	16.0	13.5
7	10.0	7.0	13.0	9.0	18.0	15.0	18.5	16.0	22.0	16.5	15.0	13.0
8	10.5	8.0	13.5	9.5	18.5	14.5	19.0	15.5	23.5	18.5	14.0	13.5
9	11.0	7.0	12.0	10.5	16.5	14.5	17.5	15.5	23.0	19.0	14.0	13.5
10	11.5	8.5	10.5	9.5	14.5	13.0	16.5	14.0	20.5	18.0	13.5	12.5
11	11.5	9.0	10.5	9.0	15.5	12.5	15.5	14.5	19.0	17.5	14.0	12.0
12	11.0	7.5	10.0	9.0	15.0	13.0	19.0	13.0	19.0	16.5	14.5	12.0
13	9.5	8.0	10.0	9.5	14.0	12.5	16.5	15.5	19.5	16.5	13.5	12.5
14	9.0	7.5	9.5	8.5	13.5	11.5	20.0	16.0	19.0	17.0	15.0	12.5
15	8.5	7.5	10.0	8.5	13.5	11.5	18.0	15.5	18.5	17.0	15.0	13.5
16	9.5	7.5	11.0	8.0	13.5	12.0	16.5	14.5	19.0	15.5	14.0	12.0
17	9.0	7.5	11.0	8.5	17.0	11.5	18.0	14.0	19.5	15.5	12.5	11.0
18	9.5	7.5	13.0	9.0	15.5	13.5	20.0	15.0	19.0	15.5	12.5	10.5
19	9.5	8.0	14.0	10.0	17.0	12.5	20.5	16.0	18.5	16.5	13.0	10.5
20	9.5	7.5	14.5	11.0	15.0	13.5	22.0	16.0	17.5	16.0	12.5	11.0
21	9.0	7.5	12.5	10.5	15.0	14.0	23.0	17.5	16.0	15.0	13.5	11.5
22	8.5	7.5	11.0	9.0	14.5	13.5	22.5	18.0	16.5	14.5	13.5	12.5
23	9.0	7.0	12.0	8.5	15.0	13.0	21.5	18.0	15.5	14.5	14.5	12.5
24	10.5	8.5	12.0	8.5	15.5	12.0	21.5	17.5	16.5	14.0	15.0	12.5
25	10.0	9.0	10.5	9.0	14.0	13.5	22.0	17.0	17.5	14.5	15.5	13.0
26	9.5	9.0	10.5	9.5	18.0	13.0	20.0	17.5	17.5	13.5	15.0	13.5
27	11.0	8.5	11.5	10.0	19.5	14.5	18.0	16.0	18.0	14.5	15.0	13.5
28	10.5	9.0	11.5	10.0	17.5	16.0	20.5	16.5	19.0	14.5	14.0	13.0
29	11.0	7.5	13.0	9.0	16.0	15.0	22.0	17.0	19.5	16.0	14.5	12.0
30	9.5	8.5	14.0	9.5	15.5	14.5	21.5	17.0	19.0	17.0	15.0	13.5
31	---	---	15.0	10.5	---	---	21.5	17.0	17.5	17.0	---	---
MONTH	11.5	6.5	15.0	7.5	19.5	11.5	23.0	13.0	23.5	13.5	19.0	10.5

14305500 SILETZ RIVER AT SILETZ, OR

LOCATION.--Lat 44°42'53", long 123°53'10", in NW¼SW¼ sec.11, T.10 S., R.10 W., Lincoln County, Hydrologic Unit 17100204, on right bank, 1.8 mi (2.9 km) downstream from Baker Creek, 1.5 mi (2.4 km) east of Siletz, and at mile 42.6 (68.5 km).

DRAINAGE AREA.--202 mi² (523 km²).

PERIOD OF RECORD.--October 1905 to November 1911, January to May 1912, January to June 1924, November 1924 to current year. Prior to December 1905 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1935: 1963, 1947-49(M), 1953-58(M).

GAGE.--Water-stage recorder. Datum of gage is 102.32 ft (31.187 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1905, to Sept. 30, 1938, nonrecording gages at various sites within 2.5 mi (4.0 km) downstream at different datums.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Slight regulation from logponds. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--59 years (water years 1906-11, 1926-78), 1,578 ft³/s (44.69 m³/s), 106.09 in/yr (2,695 mm/yr), 1,143,000 acre-ft/yr (1.41 hm³/yr).

EXTREMES FOR PERIOD OF RECORD (1905-12, 1924-38).--Maximum discharge, 34,600 ft³/s (980 m³/s) Nov. 22, 1909, gage height, 24.6 ft (7.50 m), site and datum then in use; minimum observed, 51 ft³/s (1.44 m³/s) Dec. 6, 7, 1929.

EXTREMES FOR PERIOD OF RECORD (1938-78).--Maximum discharge, 32,200 ft³/s (912 m³/s) Jan. 28, 1965, gage height, 27.32 ft (8.327 m), present site and datum; minimum, 48 ft³/s (1.36 m³/s) Sept. 25, 26, Oct. 4, 1965, Sept. 28, 29, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1921, reached a stage of 31.6 ft (9.63 m), at site 2.5 mi (4.0 km) downstream at different datum, from floodmark, discharge, 40,800 ft³/s (1,160 m³/s), from rating curve extended above 17,000 ft³/s (481 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 14,000 ft³/s (396 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	1530	21,800	617	19.88	6.059	Dec. 13	unknown	*23,100	654	*20.76	6.328
Dec. 2	1930	21,700	615	19.86	6.053						

Minimum, 107 ft³/s (3.03 m³/s) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	441	3540	3340	1200	1370	1230	537	881	608	325	135	195
2	401	5100	11700	1600	2140	1110	755	804	563	325	130	211
3	370	3130	11900	1750	2280	1030	859	737	526	307	130	220
4	347	2290	6290	3380	2030	975	924	706	495	299	129	299
5	320	2180	4230	4380	1800	873	1720	657	459	280	125	307
6	316	1960	5040	5190	1840	810	1790	602	428	269	123	299
7	495	2010	4770	3900	2670	853	1510	563	410	257	119	265
8	464	1750	3790	3860	3160	1020	1280	526	396	246	117	276
9	401	1510	3030	3850	3110	859	1110	510	459	240	113	700
10	370	1310	3420	3130	2690	798	989	500	563	236	109	1610
11	347	1160	6280	2620	2300	761	873	688	780	236	107	1520
12	329	1080	6790	2370	2000	737	798	602	602	230	121	1050
13	311	1410	18500	2210	1730	786	743	2000	596	217	150	859
14	296	3580	18000	2180	1600	737	755	4200	712	214	141	767
15	280	5940	16000	1990	1600	688	743	4250	847	211	143	627
16	269	4600	12000	2010	1430	645	755	3400	767	250	173	542
17	257	3170	7000	2330	1350	614	975	2400	688	227	173	521
18	250	2450	4000	2670	1300	579	2070	2000	621	208	138	602
19	243	1940	3000	2750	1220	553	1940	1600	579	198	129	489
20	233	1610	2500	2730	1170	526	1830	1300	526	190	195	446
21	230	1370	2200	3470	1120	505	1990	1100	495	180	269	437
22	224	1460	2000	3760	1080	484	3130	1000	464	170	195	437
23	292	2770	2000	3100	1020	510	2990	950	441	160	184	537
24	334	7260	2100	2550	1000	694	2340	850	419	160	401	464
25	510	20400	1900	2140	1200	924	2000	800	410	150	437	432
26	441	12200	1800	1850	1700	810	1600	816	401	150	374	401
27	392	6390	1500	1570	1570	737	1370	939	374	160	288	392
28	419	4260	1400	1410	1380	676	1210	953	347	160	240	365
29	931	4600	1400	1240	---	627	1060	822	343	150	214	343
30	3050	3730	1500	1110	---	590	982	743	338	140	195	329
31	2840	---	1300	1080	---	548	---	669	---	140	190	---
TOTAL	16403	116160	170680	79380	48850	23289	41628	38568	15657	6685	5687	15942
MEAN	529	3872	5506	2561	1745	751	1388	1244	522	216	183	531
MAX	3050	20400	18500	5190	3160	1230	3130	4250	847	325	437	1610
MIN	224	1080	1300	1080	1000	484	537	500	338	140	107	195
CFSM	2.62	19.2	27.3	12.7	8.64	3.72	6.87	6.16	2.58	1.07	.91	2.63
IN.	3.02	21.39	31.43	14.62	9.00	4.29	7.67	7.10	2.88	1.23	1.05	2.94
AC-FT	32540	230400	338500	157500	96910	46190	82570	76500	31060	13260	11280	31620

CAL YR 1977 TOTAL 518507 MEAN 1421 MAX 20400 MIN 79 CFSM 7.04 IN 95.49 AC-FT 1028000
WTR YR 1978 TOTAL 578939 MEAN 1586 MAX 20400 MIN 107 CFSM 7.85 IN 106.62 AC-FT 1148000

NOTE.--No gage-height record Dec. 13 to Jan. 2.

14306030 YAQUINA RIVER NEAR CHITWOOD, OR

LOCATION.--Lat 44°39'29", long 123°50'15", in NE¼SW¼ sec.31, T.10 S., R.9 W., Lincoln County, Hydrologic Unit 17100204, on left bank 200 ft (60 m) below Thornton Creek and 1.1 mi (1.8 km) west of Chitwood.

DRAINAGE AREA.--71.0 mi^2 (183.9 km^2).

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 28.43 ft (8.665 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those below 20 ft^3/s (0.57 m^3/s), which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--6 years, 254 ft^3/s (7.19 m^3/s), 48.58 in/yr (1,234 mm/yr), 184,000 acre-ft/yr (227 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,150 ft^3/s (174 m^3/s) Nov. 16, 1973, gage height, 14.43 ft (4.398 m); minimum, 2.8 ft^3/s (0.079 m^3/s) Sept. 27, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s (85.0 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	1100	3,590	102	10.76	3.280
Dec. 3	0230	3,160	89.5	10.02	3.054
Dec. 13	2300	*3,900	110	*11.28	3.438

Minimum, 11 ft^3/s (0.31 m^3/s) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	232	561	311	216	166	77	150	81	39	15	15
2	34	416	1450	286	311	158	99	134	75	36	15	15
3	32	318	2420	321	381	150	106	124	72	36	15	16
4	29	235	1230	473	368	144	103	120	68	34	15	21
5	28	232	831	698	339	134	183	110	65	33	15	23
6	28	270	727	1340	329	124	235	103	60	33	13	24
7	39	247	691	979	388	124	216	97	56	32	13	21
8	41	213	621	798	487	120	181	91	54	30	13	21
9	35	186	529	766	561	112	158	91	60	29	13	33
10	32	161	483	671	576	106	139	89	73	29	12	58
11	30	142	883	568	515	103	122	95	75	28	12	48
12	29	129	1110	494	440	99	110	89	60	28	13	36
13	28	147	2550	437	368	106	103	152	62	27	14	33
14	27	266	3130	409	325	99	101	462	73	27	14	35
15	26	613	3040	385	307	93	106	683	83	27	16	30
16	26	606	2550	385	273	91	110	568	70	35	19	25
17	26	433	1480	487	260	87	122	444	60	29	19	26
18	25	352	1100	628	244	83	213	352	56	26	16	36
19	25	286	914	606	229	81	270	280	51	25	15	33
20	25	241	758	558	213	79	266	232	49	24	23	28
21	24	210	606	587	198	77	273	195	48	22	26	27
22	24	254	490	719	186	75	466	172	46	21	20	26
23	29	663	412	652	175	77	598	155	45	20	18	26
24	35	1480	388	536	169	89	469	139	42	20	22	25
25	39	3390	455	447	181	93	368	127	43	19	22	23
26	38	2330	444	375	186	87	300	129	42	18	21	22
27	35	1200	392	314	178	83	247	127	39	18	17	21
28	36	787	342	273	172	81	204	117	39	18	15	21
29	68	702	321	238	---	79	178	101	39	18	15	20
30	247	628	349	210	---	77	169	93	38	17	13	20
31	213	---	332	201	---	75	---	87	---	16	14	---
TOTAL	1392	17369	31589	16152	8575	3152	6292	5908	1724	814	503	808
MEAN	44.9	579	1019	521	306	102	210	191	57.5	26.3	16.2	26.9
MAX	247	3390	3130	1340	576	166	598	683	83	39	26	58
MIN	24	129	321	201	169	75	77	87	38	16	12	15
CFSM	.63	8.16	14.4	7.34	4.31	1.44	2.96	2.69	.81	.37	.23	.38
IN.	.73	9.10	16.55	8.46	4.49	1.65	3.30	3.10	.90	.43	.26	.42
AC-FT	2760	34450	62660	32040	17010	6250	12480	11720	3420	1610	998	1600

CAL YR 1977 TOTAL 79731.7 MEAN 218 MAX 3390 MIN 7.3 CFSM 3.07 IN 41.77 AC-FT 158100
WTR YR 1978 TOTAL 94278.0 MEAN 258 MAX 3390 MIN 12 CFSM 3.63 IN 49.40 AC-FT 187000

14306100 NORTH FORK ALSEA RIVER AT ALSEA, OR

LOCATION.--Lat 44°22'45", long 123°35'40", in SE¼ sec.1, T.14 S., R.8 W., Benton County, Hydrologic Unit 17100205, on left bank at Alsea, 0.2 mi (0.3 km) upstream from bridge on Lobster Valley Road, 0.7 mi (1.1 km) upstream from confluence with South Fork, and at mile 49.4 (79.5 km).

DRAINAGE AREA.--63.0 mi^2 (163 km^2).

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 272.31 ft (83.000 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No regulation. Some diversions by pumping above station.

AVERAGE DISCHARGE.--21 years, 285 ft^3/s (8.071 m^3/s), 61.43 in/yr (1,560 mm/yr), 206,500 acre-ft/yr (255 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft^3/s (399 m^3/s) Dec. 22, 1964, gage height, 14.57 ft (4.441 m), from rating curve extended above 2,900 ft^3/s (82.1 m^3/s) on basis of slope-area measurement at gage height 11.80 ft (3.597 m); minimum, 12 ft^3/s (0.34 m^3/s) Sept. 25, Oct. 2, 1965, Aug. 11, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s (56.6 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	1800	4,160	118	7.97	2.429	Dec. 13	1630	*5,700	161	*9.41	2.868
Dec. 2	2030	2,440	69.1	6.08	1.853	Jan. 5	2030	2,030	57.5	5.57	1.698

Minimum, 23 ft^3/s (0.65 m^3/s) Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	297	404	293	359	207	121	185	99	52	30	31
2	32	444	1160	279	736	193	165	172	94	52	27	30
3	30	252	1360	444	707	185	180	157	90	50	26	31
4	31	185	806	731	530	180	180	153	87	49	27	39
5	31	196	590	1090	448	167	363	141	83	47	26	45
6	35	204	697	1430	440	160	320	132	80	46	26	42
7	60	196	683	853	517	167	255	125	78	45	25	39
8	57	170	557	711	618	172	215	119	77	43	25	47
9	47	148	473	683	600	155	191	119	82	42	25	96
10	42	125	452	590	530	150	172	113	87	41	25	132
11	39	111	1320	508	457	148	157	145	83	40	25	80
12	36	103	1170	457	404	141	148	132	77	40	27	59
13	35	128	4240	436	352	155	141	188	82	38	30	53
14	34	265	3090	420	331	148	148	613	80	36	30	53
15	33	412	3330	393	345	143	160	618	82	39	30	47
16	32	348	2030	436	320	136	167	436	75	49	31	42
17	32	258	1260	645	307	132	207	345	70	41	30	42
18	31	224	896	673	290	128	348	286	69	38	29	49
19	31	188	692	613	272	123	356	239	67	36	28	43
20	30	162	567	548	255	119	334	210	64	34	32	39
21	30	145	482	586	236	115	370	185	62	32	33	36
22	30	416	420	645	218	113	853	172	60	31	32	39
23	40	697	393	548	207	143	736	160	60	31	31	39
24	41	1240	461	465	204	199	499	153	57	30	45	35
25	59	3210	436	404	239	191	393	141	57	30	47	34
26	57	1690	389	356	258	167	324	141	56	30	40	32
27	49	832	345	317	239	153	279	136	54	30	31	32
28	47	567	314	293	221	141	245	125	52	31	29	31
29	134	517	317	262	---	134	215	117	50	30	28	30
30	317	432	352	242	---	128	207	111	52	30	30	30
31	230	---	320	242	---	121	---	105	---	29	31	---
TOTAL	1766	14162	30006	16593	10640	4714	8449	6174	2166	1192	931	1377
MEAN	57.0	472	968	535	380	152	282	199	72.2	38.5	30.0	45.9
MAX	317	3210	4240	1430	736	207	853	618	99	52	47	132
MIN	30	103	314	242	204	113	121	105	50	29	25	30
CFSM	.91	7.49	15.4	8.49	6.03	2.41	4.48	3.16	1.15	.61	.48	.73
IN.	1.04	8.36	17.72	9.80	6.28	2.78	4.99	3.65	1.28	.70	.55	.81
AC-FT	3500	28090	59520	32910	21100	9350	16760	12250	4300	2360	1850	2730

CAL YR 1977 TOTAL 71735 MEAN 197 MAX 4240 MIN 13 CFSM 3.13 IN 42.36 AC-FT 142300
WTR YR 1978 TOTAL 98170 MEAN 269 MAX 4240 MIN 25 CFSM 4.27 IN 57.97 AC-FT 194700

14306400 FIVE RIVERS NEAR FISHER, OR

LOCATION.--Lat 44°20'15", long 123°49'35", W½ sec.19, T.14 S., R.9 W., Lincoln County, Hydrologic Unit 17100205, in Siuslaw National Forest, on left bank at downstream side of abandoned highway bridge, 500 ft (152 m) downstream from Lobster Creek, 3.2 mi (5.1 km) north of Fisher, and at mile 3.3 (5.3 km).

DRAINAGE AREA.--114 mi^2 (295 km^2).

PERIOD OF RECORD.--August 1958 to September 1963, October 1967 to current year.

REVISED RECORDS.--WSP 1718: 1959.

GAGE.--Water-stage recorder. Altitude of gage is 130 ft (39.6 m) from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--16 years, 567 ft^3/s (16.06 m^3/s), 67.54 in/yr (1,716 mm/yr), 410,800 acre-ft/yr (507 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft^3/s (487 m^3/s) Jan. 21, 1972, gage height, 21.08 ft (6.425 m); minimum, 16 ft^3/s (0.45 m^3/s) Oct. 1, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 22.3 ft (6.80 m), from floodmarks, discharge, 19,000 ft^3/s (538 m^3/s), from rating curve extended above 10,000 ft^3/s (283 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft^3/s (113 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	1930	8,980	254	15.21	4.636	Jan. 5	2400	5,150	146	11.57	3.527
Dec. 13	1900	*12,000	340	*17.55	5.349						

Minimum, 35 ft^3/s (0.99 m^3/s) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	579	898	656	722	412	220	415	207	91	43	45
2	67	1070	1660	635	1340	387	325	380	195	92	43	45
3	63	638	2640	1110	1430	372	395	352	184	89	42	48
4	58	480	1660	1930	1050	362	423	337	176	89	41	67
5	55	543	1240	2760	890	337	890	315	169	84	41	74
6	58	534	1550	3820	858	317	729	290	159	80	41	69
7	104	465	1630	2170	1090	357	546	272	152	80	41	60
8	96	380	1280	1840	1300	387	453	256	146	79	39	67
9	80	327	1080	1750	1330	352	397	256	155	77	38	205
10	70	290	982	1450	1190	327	357	245	180	79	35	315
11	66	260	2710	1210	998	317	327	292	172	77	37	192
12	61	250	3060	1080	866	302	302	256	146	70	42	125
13	58	320	8770	1000	736	312	287	415	159	66	52	103
14	57	500	8180	966	684	290	317	1520	157	63	48	99
15	55	850	7250	894	775	277	325	1500	155	67	49	84
16	52	780	4720	1080	736	265	337	970	140	91	55	74
17	51	567	3090	1680	666	254	474	743	129	74	48	79
18	49	507	2190	1780	603	245	926	614	123	64	43	117
19	48	438	1670	1510	552	235	858	528	121	61	41	94
20	48	387	1330	1310	510	224	792	462	114	60	46	80
21	48	362	1110	1360	468	218	882	412	112	57	52	74
22	45	1330	954	1500	435	211	1700	385	106	56	48	72
23	72	1710	922	1270	407	256	1500	360	104	52	46	75
24	92	2670	1330	1070	400	357	1060	340	103	51	112	67
25	167	6350	1180	918	483	342	842	320	104	49	138	63
26	159	4160	998	785	522	302	701	310	104	48	99	60
27	125	2030	854	680	489	275	607	297	97	49	64	58
28	131	1350	754	624	444	256	543	275	91	49	54	57
29	444	1200	747	549	---	242	483	252	91	49	49	54
30	1040	1010	810	498	---	229	459	235	92	46	45	54
31	617	---	729	492	---	218	---	220	---	45	46	---
TOTAL	4213	32337	67978	40377	21974	9237	18457	13824	4143	2084	1618	2676
MEAN	136	1078	2193	1302	785	298	615	446	138	67.2	52.2	89.2
MAX	1040	6350	8770	3820	1430	412	1700	1520	207	92	138	315
MIN	45	250	729	492	400	211	220	220	91	45	35	45
CFSM	1.19	9.46	19.2	11.4	6.89	2.61	5.40	3.91	1.21	.59	.46	.78
IN.	1.37	10.55	22.18	13.18	7.17	3.01	6.02	4.51	1.35	.68	.53	.87
AC-FT	8360	64140	134800	80090	43590	18320	36610	27420	8220	4130	3210	5310

CAL YR 1977 TOTAL 162708 MEAN 446 MAX 8770 MIN 23 CFSM 3.91 IN 53.09 AC-FT 322700
WTR YR 1978 TOTAL 218918 MEAN 600 MAX 8770 MIN 35 CFSM 5.26 IN 71.44 AC-FT 434200

14306500 ALSEA RIVER NEAR TIDEWATER, OR

LOCATION.--Lat 44°23'10", long 123°49'50", in NW¼NW¼ sec.6, T.14 S., R.9 W., Lincoln County, Hydrologic Unit 17100205, on right bank 0.9 mi (1.4 km) downstream from Grass Creek, 2.5 mi (4.0 km) upstream from Scott Creek, 3.8 mi (6.1 km) southeast of Tidewater, and at mile 21.0 ((33.8 km).

DRAINAGE AREA.--334 mi^2 (865 km^2).

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 48.16 ft (14.679 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 16, 1939, nonrecording gage at present site and datum.

REMARKS.--Records excellent. No regulation. Diversion for irrigation above station.

AVERAGE DISCHARGE.--39 years, 1,536 ft^3/s (43.50 m^3/s), 62.45 in/yr (1,586 mm/yr), 1,113,000 acre-ft/yr (1.37 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,800 ft^3/s (1,180 m^3/s) Dec. 22, 1964, gage height, 27.44 ft (8.364 m); minimum, 45 ft^3/s (1.27 m^3/s) Sept. 26, 27, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood on or about Feb. 3, 1890, reached a stage of 29.5 ft (8.99 m), from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 13,000 ft^3/s (368 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2200	18,290	515	17.49	5.331	Jan. 6	0300	13,100	371	14.65	4.465
Dec. 13	2100	*24,700	700	*20.60	6.278						

Minimum, 103 ft^3/s (2.92 m^3/s) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193	1190	2350	1660	2500	1160	624	1150	606	272	131	129
2	174	2310	4750	1550	3800	1090	811	1050	575	272	129	129
3	161	1430	8500	2310	4350	1040	1020	981	545	266	126	131
4	152	1020	4490	5050	3220	1010	1030	945	524	266	122	167
5	144	1080	3490	6290	2680	960	1970	884	500	252	120	202
6	148	1160	3780	10600	2560	894	1900	820	472	241	117	215
7	222	1070	4080	6250	3050	919	1440	772	452	233	117	180
8	267	965	3280	5010	3740	1060	1210	730	445	228	113	187
9	225	795	2710	4740	3800	950	1060	717	460	220	110	460
10	197	697	2500	3990	3400	884	970	708	516	217	107	772
11	180	618	6300	3310	2880	855	879	811	528	210	107	567
12	167	578	7610	2960	2510	830	820	777	445	207	113	366
13	159	689	17600	2710	2160	840	782	945	460	200	141	293
14	156	1100	19200	2650	1950	816	830	3500	472	192	145	284
15	152	2020	18200	2470	2110	772	865	4060	476	195	137	252
16	144	1900	13200	2800	1980	744	904	2650	437	252	154	220
17	142	1370	8740	4210	1830	717	1080	2010	401	233	149	220
18	138	1170	6250	4730	1690	694	2010	1650	380	205	133	284
19	135	1020	4620	4160	1570	672	2070	1420	376	190	126	258
20	133	890	3630	3620	1460	646	1920	1250	353	183	133	222
21	133	804	2960	3670	1350	628	2060	1130	343	173	154	207
22	131	2340	2510	4000	1270	611	4290	1040	333	162	149	200
23	157	4090	2270	3400	1200	676	4490	976	327	158	141	212
24	202	6300	3110	2800	1160	955	3000	929	323	151	215	192
25	299	14200	2910	2400	1310	945	2320	884	317	149	317	183
26	325	11300	2480	2100	1430	845	1920	855	311	147	263	173
27	277	5540	2130	1800	1340	777	1640	845	296	145	187	169
28	259	3520	1870	1600	1240	730	1460	787	281	149	156	164
29	598	3160	1820	1400	---	694	1310	726	272	151	141	160
30	1900	2650	2040	1300	---	663	1240	685	275	145	131	156
31	1340	---	1850	1300	---	633	---	646	---	137	129	---
TOTAL	9010	76976	171630	106840	63540	25710	47925	37333	12501	6201	4513	7354
MEAN	291	2566	5536	3446	2269	829	1598	1204	417	200	146	245
MAX	1900	14200	19200	10600	4350	1160	4490	4060	606	272	317	772
MIN	131	578	1820	1300	1160	611	624	646	272	137	107	129
CFSM	.87	7.68	16.6	10.3	6.79	2.48	4.78	3.61	1.25	.60	.44	.73
IN.	1.00	8.57	19.12	11.90	7.08	2.86	5.34	4.16	1.39	.69	.50	.82
AC-FT	17870	152700	340400	211900	126000	51000	95060	74050	24800	12300	8950	14590

CAL YR 1977 TOTAL 401278 MEAN 1099 MAX 19200 MIN 63 CFSM 3.29 IN 44.69 AC-FT 795900
WTR YR 1978 TOTAL 569533 MEAN 1560 MAX 19200 MIN 107 CFSM 4.67 IN 63.43 AC-FT 1130000

14306900 BIG CREEK NEAR ROOSEVELT BEACH, OR

LOCATION.--Lat 44°10'05", long 124°03'55", in SE¼SE¼ sec.13, T.16 S., R.12 W., Lane County, Hydrologic Unit 17100205, on right bank 1.0 mi (1.6 km) downstream from Frying Pan Creek, 2.5 mi (4.0 km) east of Roosevelt Beach.

DRAINAGE AREA.--11.9 mi^2 (30.8 km^2).

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 141 ft (43.0 m), by barometer.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--6 years, 97.3 ft^3/s (2.756 m^3/s), 111.04 in/yr (2,820 mm/yr), 70,490 acre-ft/yr (86.9 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,150 ft^3/s (60.9 m^3/s) Nov. 30, 1975, gage height, 6.90 ft (2.103 m); minimum, 4.5 ft^3/s (0.13 m^3/s) Oct. 18-21, 24, 25, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft^3/s (22.7 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	0330	*1,450	41.1	*6.40	1.951	Dec. 13	1300	909	25.7	5.86	1.786
Dec. 2	1830	1,200	34.0	6.18	1.884						

Minimum, 8.2 ft^3/s (0.23 m^3/s) Aug. 6-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	156	280	110	92	85	32	65	42	21	9.9	11
2	28	221	707	108	116	78	38	59	41	21	9.5	13
3	26	185	892	167	124	73	41	53	39	20	9.5	14
4	25	190	510	220	112	69	46	50	36	20	9.2	16
5	23	140	336	318	108	63	91	47	34	19	9.2	14
6	33	120	355	422	108	58	72	43	32	18	8.9	13
7	39	122	313	322	144	63	63	41	32	17	8.2	12
8	31	116	256	309	164	56	57	38	29	17	8.2	21
9	28	106	213	305	189	50	52	40	32	17	8.2	46
10	27	96	207	256	175	47	48	36	43	17	8.2	36
11	25	90	305	213	151	47	44	48	40	17	8.2	27
12	24	91	336	175	135	45	41	40	33	16	14	22
13	23	96	801	154	112	63	41	139	37	16	12	22
14	23	221	769	139	112	52	51	284	38	15	9.9	21
15	22	364	693	130	107	48	47	280	37	16	12	19
16	22	302	539	164	95	46	51	210	34	20	11	18
17	21	228	417	220	91	44	92	167	31	16	9.9	19
18	20	185	327	234	88	41	198	135	29	15	9.2	22
19	20	148	252	245	81	40	178	110	29	14	8.6	19
20	20	125	210	264	76	38	167	95	27	14	14	18
21	19	113	169	300	72	35	164	82	27	13	12	18
22	19	197	142	288	66	35	252	76	26	12	11	19
23	35	247	164	245	63	43	227	69	25	12	14	18
24	52	612	230	198	62	48	186	64	25	12	34	17
25	50	1180	227	167	116	43	149	59	24	12	21	16
26	47	801	195	137	112	39	122	64	24	11	17	16
27	41	472	164	114	101	36	101	70	22	11	14	17
28	47	313	142	100	92	35	89	63	22	11	12	16
29	93	355	151	88	---	33	78	55	22	11	11	15
30	111	276	139	78	---	32	74	50	22	11	11	14
31	104	---	120	77	---	31	---	46	---	10	11	---
TOTAL	1128	7868	10561	6267	3064	1516	2892	2678	934	472	365.8	569
MEAN	36.4	262	341	202	109	48.9	96.4	86.4	31.1	15.2	11.8	19.0
MAX	111	1180	892	422	189	85	252	284	43	21	34	46
MIN	19	90	120	77	62	31	32	36	22	10	8.2	11
CFSM	3.06	22.0	28.7	17.0	9.16	4.11	8.10	7.26	2.61	1.28	.99	1.60
IN.	3.53	24.59	33.01	19.59	9.58	4.74	9.04	8.37	2.92	1.48	1.14	1.78
AC-FT	2240	15610	20950	12430	6080	3010	5740	5310	1850	936	726	1130

CAL YR 1977 TOTAL 32787.8 MEAN 89.8 MAX 1180 MIN 6.0 CFSM 7.55 IN 102.49 AC-FT 65030
WTR YR 1978 TOTAL 38314.8 MEAN 105 MAX 1180 MIN 8.2 CFSM 8.82 IN 119.76 AC-FT 76000

14307580 LAKE CREEK NEAR DEADWOOD, OR

LOCATION.--Lat 44°04'58", long 123°47'05", in NW¼NW¼ sec.21, T.17 S., R.9 W., Lane County, Hydrologic Unit 17100206, on right bank 0.2 mi (0.3 km) upstream from Indian Creek, 1.5 mi (2.4 km) southwest of Deadwood, and at mile 2.6 (4.2 km).

DRAINAGE AREA.--174 mi^2 (451 km^2).

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 178.86 ft (54.517 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow slightly regulated by natural storage in Triangle Lake. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--11 years, 751 ft^3/s (21.27 m^3/s), 58.61 in/yr (1,489 mm/yr), 544,100 acre-ft/yr (671 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,700 ft^3/s (558 m^3/s) Jan. 21, 1972, gage height, 15.25 ft (4.648 m); minimum, 12 ft^3/s (0.34 m^3/s) Aug. 14, 15, 17, 18, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,200 ft^3/s (119 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	1930	10,900	309	10.74	3.274	Dec. 13	1800	*13,300	377	*12.10	3.688
Dec. 3	0030	6,040	171	7.53	2.295	Jan. 6	0030	7,820	221	8.80	2.682

Minimum, 32 ft^3/s (0.91 m^3/s) Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	632	1130	1040	1050	538	297	535	268	116	46	47
2	73	958	2330	951	2090	505	483	486	252	117	45	46
3	71	637	4200	1590	2550	486	582	448	239	113	44	46
4	66	467	2520	2990	1900	483	631	425	229	112	43	67
5	62	516	1830	4170	1530	456	1140	398	217	106	41	91
6	71	603	2190	5960	1350	430	1070	373	205	99	41	83
7	101	500	2310	3810	1450	455	821	352	195	95	39	72
8	106	408	1790	2900	1740	541	660	333	189	91	38	79
9	94	351	1460	2460	1780	507	557	325	199	88	36	165
10	84	309	1310	2030	1650	471	485	319	246	86	33	269
11	76	276	2710	1710	1400	446	432	378	232	84	32	213
12	71	256	3400	1590	1210	422	394	365	207	81	36	163
13	66	330	10100	1480	1050	421	372	407	202	78	46	133
14	62	499	9630	1410	950	395	401	1450	207	74	46	122
15	60	873	8890	1310	980	374	425	1800	213	77	43	107
16	58	799	6840	1370	951	359	439	1260	196	99	50	92
17	55	587	5200	2160	900	347	497	954	180	87	49	87
18	53	496	3760	2370	845	335	752	761	170	77	43	105
19	53	426	2770	2080	789	324	839	633	166	72	42	95
20	51	370	2100	1860	736	312	891	545	155	70	49	86
21	49	341	1670	1940	681	303	1040	478	148	67	59	79
22	49	1300	1390	2120	632	295	2300	442	142	63	53	73
23	64	1860	1350	1840	595	339	2280	414	140	60	52	70
24	88	3960	2660	1550	577	402	1590	392	139	58	100	66
25	155	8760	2350	1330	593	394	1190	379	137	56	103	63
26	155	5800	1820	1160	643	368	969	376	135	54	80	60
27	133	3190	1470	1020	617	346	815	371	126	55	66	58
28	128	2010	1230	921	575	328	712	351	119	55	59	57
29	246	1600	1150	831	---	313	627	326	117	54	52	57
30	685	1320	1300	760	---	301	582	305	117	52	48	55
31	790	---	1190	755	---	289	---	287	---	49	48	---
TOTAL	3959	40434	94050	59468	31814	12285	24273	16668	5487	2445	1562	2806
MEAN	128	1348	3034	1918	1136	396	809	538	183	78.9	50.4	93.5
MAX	790	8760	10100	5960	2550	541	2300	1800	268	117	103	269
MIN	49	256	1130	755	575	289	297	287	117	49	32	46
CFSM	.74	7.75	17.4	11.0	6.53	2.28	4.65	3.09	1.05	.45	.29	.54
IN.	.85	8.64	20.11	12.71	6.80	2.63	5.19	3.56	1.17	.52	.33	.60
AC-FT	7850	80200	186500	118000	63100	24370	48150	33060	10880	4850	3100	5570

CAL YR 1977 TOTAL 210573 MEAN 577 MAX 10100 MIN 12 CFSM 3.32 IN 45.02 AC-FT 417700
WTR YR 1978 TOTAL 295251 MEAN 809 MAX 10100 MIN 32 CFSM 4.65 IN 63.12 AC-FT 585600

14307620 SIUSLAW RIVER NEAR MAPLETON, OR
(National stream-quality accounting network station)

LOCATION.--Lat 44°03'45", long 123°52'55, in SW¼NW¼ sec.27, T.17 S., R.10 W., Lane County, Hydrologic Unit 17100206, on right bank 250 ft (76 m) above Shoemaker Creek, 2.5 mi (4.0 km) northwest of Mapleton, and at mile 23.7 (38.1 km).

DRAINAGE AREA.--588 mi^2 (1,523 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 41 ft (12.5 m), from topographic map.

REMARKS.--Records good. No regulation or diversions above station.

AVERAGE DISCHARGE.--11 years, 2,232 ft^3/s (63.21 m^3/s), 51.55 in/yr (1,309 mm/yr), 1,617,000 acre-ft/yr (1.99 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,400 ft^3/s (1,400 m^3/s) Jan. 21, 1972, gage height, 28.45 ft (8.672 m); minimum, 45 ft^3/s (1.27 m^3/s) Aug. 18, 19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1964 reached a stage of about 28 ft (8.5 m), from information by local residents (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft^3/s (425 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2200	30,500	864	21.67	6.605	Dec. 13	2000	*36,400	1,030	*23.99	7.312
Dec. 3	0300	17,700	501	16.03	4.886	Jan. 6	0230	22,700	643	18.37	5.599

Minimum, 151 ft^3/s (4.28 m^3/s) Aug. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	251	1510	3070	3270	2750	1650	957	1650	778	458	205	205
2	229	2220	5870	2910	5460	1560	1340	1530	724	463	202	202
3	214	1650	14300	4090	7520	1520	1670	1430	660	448	198	205
4	201	1150	7610	7130	6070	1510	1820	1350	643	448	188	248
5	190	1240	5330	10500	5120	1440	2550	1280	604	434	188	337
6	203	1630	5490	18200	4300	1380	2750	1220	571	415	188	360
7	264	1370	5960	10700	4400	1420	2270	1150	550	396	185	311
8	293	1070	5120	7510	5160	1740	1890	1100	529	378	175	315
9	264	889	3860	6400	5250	1720	1620	1060	550	369	172	513
10	238	760	3420	5450	4960	1580	1450	1040	741	364	163	971
11	220	672	6440	4970	4050	1490	1330	1190	808	360	154	802
12	209	621	9060	4590	3290	1410	1230	1160	706	323	157	621
13	198	766	26100	4240	2910	1400	1160	1250	694	315	182	498
14	193	1260	27800	4120	2660	1320	1250	3490	706	307	195	448
15	183	2410	25400	3880	2650	1250	1340	4630	712	307	185	391
16	177	2320	20400	4090	2560	1200	1440	3110	666	369	202	337
17	171	1720	16900	6490	2460	1160	1650	2450	621	351	205	319
18	165	1380	11100	7730	2360	1130	2380	2060	588	319	198	360
19	162	1140	7460	6440	2240	1090	2520	1760	577	300	185	346
20	159	971	5630	5730	2130	1050	2540	1550	555	288	198	311
21	156	870	4880	5610	2020	1020	2740	1410	545	273	227	296
22	154	2510	3950	6040	1900	991	5270	1310	524	262	230	281
23	187	4980	3620	5490	1800	1080	6400	1250	518	252	219	277
24	245	10200	7880	4960	1750	1250	4710	1200	518	244	307	266
25	420	23900	7780	4090	1810	1260	3210	1180	518	234	415	252
26	459	19200	5580	3320	1990	1190	2690	1160	508	230	351	237
27	395	8620	4650	2950	1890	1100	2340	1160	488	227	288	230
28	371	5370	3620	2700	1760	1050	2130	1080	463	227	262	223
29	606	4650	3200	2470	---	1010	1920	985	453	227	230	212
30	1750	3590	3860	2290	---	978	1780	903	453	223	212	212
31	1810	---	4090	2250	---	950	---	839	---	212	205	---
TOTAL	10737	110639	269430	170610	93220	39899	68347	47937	17971	10023	6671	10586
MEAN	346	3688	8691	5504	3329	1287	2278	1546	599	323	215	353
MAX	1810	23900	27800	18200	7520	1740	6400	4630	808	463	415	971
MIN	154	621	3070	2250	1750	950	957	839	453	212	154	202
CFSM	.59	6.27	14.8	9.36	5.66	2.19	3.87	2.63	1.02	.55	.37	.60
IN.	.68	7.00	17.05	10.79	5.90	2.52	4.32	3.03	1.14	.63	.42	.67
AC-FT	21300	219500	534400	338400	184900	79140	135600	95080	35650	19880	13230	21000

CAL YR 1977 TOTAL 580170 MEAN 1590 MAX 27800 MIN 45 CFSM 2.70 IN 36.70 AC-FT 1151000
WTR YR 1978 TOTAL 856070 MEAN 2345 MAX 27800 MIN 154 CFSM 3.99 IN 54.16 AC-FT 1698000

14307620 SIUSLAW RIVER NEAR MAPLETON, OR—Continued
(National stream quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1978 to current year.
WATER TEMPERATURES: November 1967 to September 1975. October 1977 to current year.

INSTRUMENTATION.--Graphic temperature recorder since June 1967. Dual conductivity-temperature servo-programmer with digital recorder since June 1978.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 63 micromhos Sept. 26, 1978; minimum, 46 micromhos June 14, 15, 1978.
WATER TEMPERATURES: Maximum, 28.5°C Aug. 8, 9, 1978; minimum, 0.0°C Dec. 8-17, 1972.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 63 micromhos Sept. 26; minimum, 46 micromhos June 14, 15.
WATER TEMPERATURES: Maximum, 28.5°C Aug. 8, 9; minimum, 5.5°C Nov. 20, 21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)
JAN										
31...	1430	6120	8.0	6.5	11.9	39	K11	K6	12	3.5
FEB										
21...	1000	1890	9.0	6.8	12.4	33	K10	40	12	2.7
MAR										
21...	1000	832	11.0	7.2	10.5	42	K3	K2	11	2.7
APR										
18...	1030	2390	9.0	6.4	11.2	39	48	21	11	2.6
MAY										
16...	0930	3220	10.0	6.3	11.3	38	27	K17	11	3.1
JUN										
12...	1200	540	16.5	7.0	9.8	44	28	390	12	2.8
JUL										
24...	1030	208	21.5	6.8	8.8	54	K11	K8	11	3.0
AUG										
15...	1030	155	20.0	6.7	8.9	58	44	390	10	3.1
SEP										
19...	1045	318	12.5	6.9	7.9	54	K18	25	10	4.3

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
JAN									
31...	.8	3.6	.6	11	2.1	4.4	.0	.05	.05
FEB									
21...	.9	3.4	.6	12	4.4	3.7	.0	.24	.26
MAR									
21...	1.0	4.2	.8	13	2.9	4.1	.1	.16	.23
APR									
18...	1.1	3.5	.5	13	4.1	3.4	.1	.32	3.0
MAY									
16...	1.0	3.8	.6	13	3.1	3.7	.0	.16	--
JUN									
12...	1.0	4.1	.7	14	4.9	4.0	.0	.23	.19
JUL									
24...	1.2	4.5	1.0	13	1.6	4.4	.0	.28	.27
AUG									
15...	1.3	4.5	.9	16	1.3	4.8	.0	.41	1.1
SEP									
19...	1.3	4.6	.8	16	4.1	4.8	.0	.30	1.5

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	HARD-NESS (MG/L AS CACO3)
JAN									
31...	.00	.25	.30	.01	.02	--	--	--	12
FEB									
21...	.01	.29	.56	.02	.05	--	--	1.3	10
MAR									
21...	.01	.16	.40	.02	.04	--	--	1.3	11
APR									
18...	.03	.29	3.3	.00	.02	4.0	.5	--	11
MAY									
16...	.01	.36	--	.00	.01	--	--	2.0	12
JUN									
12...	.04	.10	.33	.01	.00	--	--	2.0	11
JUL									
24...	.00	.04	.31	.00	.01	2.7	.5	--	13
AUG									
15...	.02	.02	1.1	.01	.01	--	--	2.6	13
SEP									
19...	.04	.13	1.6	.02	.02	--	--	2.6	16

14307620 SIUSLAW RIVER NEAR MAPLETON, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER DAY)	TURBIDITY (JTU)	TURBIDITY (NTU)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JAN 31...	1	37	34	611	2	--	4	66	75
FEB 21...	0	35	35	179	2	--	3	15	80
MAR 21...	0	28	35	62.9	3	--	3	6.7	72
APR 18...	0	32	34	206	3	--	10	65	61
MAY 16...	0	35	34	304	--	2.6	13	113	67
JUN 12...	0	34	38	49.6	--	.70	6	8.7	77
JUL 24...	0	37	35	20.8	--	.70	3	1.7	77
AUG 15...	0	32	36	13.4	--	1.1	3	1.3	92
SEP 19...	0	39	40	33.5	--	.50	2	1.7	94

DATE	IRON, DISSOLVED (UG/L AS FE)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)
JAN 31...	50	330	0	20	0	0	0	0	0
APR 18...	20	470	0	10	0	0	100	100	1
JUL 24...	80	180	10	10	2	2	200	200	3

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
JAN 31...	1	0	0	0	0	1	5	2	3
APR 18...	1	0	10	0	0	3	4	1	6
JUL 24...	3	0	10	0	1	4	6	5	21

DATE	SILVER, DISSOLVED (UG/L AS AG)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	SELENIUM, DISSOLVED (UG/L AS SE)	SELENIUM, TOTAL (UG/L AS SE)	MERCURY DISSOLVED (UG/L AS HG)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)
JAN 31...	0	0	10	40	0	0	.0	.0
APR 18...	0	0	10	20	0	0	.0	.0
JUL 24...	0	0	10	10	0	0	.0	.0

14307620 SIUSLAW RIVER NEAR MAPLETON, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO AUGUST 1978

DATE	APR 18,78		MAY 16,78		JUN 12,78		JUL 24,78		AUG 15,78	
TIME	1030		0930		1200		1030		1030	
TOTAL CELLS/ML	480		660		850		7900		890	
DIVERSITY: DIVISION	0.8		1.1		1.0		1.0		1.3	
.CLASS	0.8		1.1		1.0		1.0		1.3	
..ORDER	1.1		1.1		1.0		1.3		1.9	
...FAMILY	2.6		1.5		1.5		1.5		2.6	
....GENUS	2.6		1.5		2.1		1.7		2.9	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	--	-	*	0	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	240	3	270#	30
...SCENEDESMACEAE										
....CRUCIGENIA	--	-	--	-	--	-	87	1	--	-
....SCENEDESMUS	--	-	--	-	--	-	650	8	--	-
....TETRASTRUM	--	-	--	-	--	-	87	1	--	-
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	--	-	--	-	87	1	180#	20
....MELOSIRA	27	6	--	-	--	-	--	-	--	-
....STEPHANODISCUS	--	-	--	-	--	-	44	1	22	2
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	--	-	110	1	67	7
....COCCONEIS	--	-	--	-	--	-	65	1	67	7
...CYMBELLACEAE										
....CYMBELLA	110#	23	38	6	150#	17	200	2	44	5
...FRAGILARIACEAE										
....SYNEDRA	95#	20	--	-	--	-	--	-	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	82#	17	--	-	15	2	87	1	44	5
...NAVICULACEAE										
....NAVICULA	41	9	150#	23	29	3	*	0	89	10
...NITZSCHIACEAE										
....HANTZSCHIA	--	-	--	-	--	-	*	0	--	-
....NITZSCHIA	14	3	38	6	--	-	--	-	22	2
...TABELLARIACEAE										
....TABELLARIA	--	-	--	-	130#	16	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROCCOCCALES										
...CHROCCOCCAEAE										
....AGMENELLUM	--	-	--	-	350#	41	--	-	--	-
....ANACYSTIS	110#	23	420#	63	180#	21	5800#	73	89	10
..HORMOGONALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	--	-	--	-	--	-	440	5	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....TRACHELOMONAS	--	-	19	3	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

14307620 SIUSLAW RIVER NEAR MAPLETON, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LENGTH OF EXPO-SURE (DAYS)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)
MAR					
21...	28	74.9	89.2	35.4	6.82
APR					
18...	28	125	145	33.5	.000

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	50	56	52
2									---	50	56	52
3									---	50	56	51
4									---	51	57	50
5									---	51	57	51
6									---	51	57	51
7									---	51	58	51
8									---	51	58	51
9									---	51	58	50
10									---	52	59	51
11									---	51	59	53
12									---	52	59	54
13									---	52	58	53
14									46	52	58	53
15									46	52	57	55
16									47	51	55	54
17									48	51	54	55
18									48	52	53	53
19									48	52	53	54
20									48	53	51	55
21									48	53	51	55
22									49	54	50	56
23									49	54	49	56
24									49	54	47	57
25									49	55	47	57
26									49	55	47	59
27									50	55	49	58
28									50	55	50	59
29									50	56	51	59
30									50	56	51	60
31									---	57	52	---
MEAN									48	53	54	54

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.0	14.0	10.5	10.0	10.0	10.0	8.0	6.5	8.5	8.5	8.5	8.0
2	14.5	13.5	10.5	10.0	10.5	10.0	6.5	6.5	8.5	8.5	8.5	8.0
3	14.0	13.5	10.0	9.0	10.5	10.5	7.0	6.5	9.0	8.5	9.0	8.5
4	14.0	13.0	9.0	8.5	10.5	10.5	8.0	7.0	9.0	9.0	9.5	9.0
5	14.0	13.5	9.0	8.5	10.0	9.5	8.5	8.0	9.0	9.0	9.5	9.5
6	14.0	13.5	9.0	9.0	9.5	9.5	8.5	8.5	9.0	9.0	9.5	9.5
7	14.0	13.5	9.5	9.0	9.5	9.0	9.0	8.5	9.0	9.0	9.5	9.5
8	14.0	13.5	9.0	8.0	9.0	8.5	9.0	8.5	9.0	9.0	10.5	9.5
9	14.0	13.0	8.0	7.0	8.0	8.0	9.0	9.0	9.0	8.5	10.0	9.5
10	14.0	12.0	8.5	8.0	9.0	8.0	9.0	9.0	8.5	8.0	9.5	9.5
11	13.5	12.0	8.5	8.5	9.5	9.0	9.0	9.0	8.0	7.0	9.5	9.5
12	13.5	12.0	9.0	8.5	10.0	9.5	9.0	9.0	7.0	6.5	9.5	9.0
13	14.0	13.5	9.5	9.0	10.5	10.0	9.0	9.0	7.0	6.5	9.0	8.5
14	14.5	14.0	10.0	9.5	10.5	10.5	9.0	9.0	8.0	7.0	9.5	8.5
15	15.0	14.0	10.5	10.0	10.0	9.5	9.0	9.0	8.0	7.0	9.0	8.0
16	15.0	14.0	10.5	10.0	9.5	9.5	9.0	9.0	7.0	7.0	9.5	8.5
17	14.0	13.0	10.0	9.0	9.5	9.5	9.0	9.0	8.0	7.0	10.5	9.0
18	14.5	13.5	9.0	7.0	9.5	9.0	9.0	9.0	8.5	8.0	11.0	10.0
19	13.5	13.0	8.0	6.0	9.0	8.5	9.0	9.0	9.5	8.5	11.5	10.5
20	13.5	13.0	6.0	5.5	8.5	8.0	9.0	9.0	9.5	9.5	12.0	11.0
21	13.5	12.0	6.0	5.5	8.0	8.0	9.0	9.0	10.0	9.5	12.0	11.0
22	11.5	11.0	7.0	6.0	8.5	8.0	9.0	8.5	10.0	10.0	11.5	11.0
23	13.0	11.5	8.0	7.0	8.5	8.5	8.5	8.0	10.0	10.0	11.0	11.0
24	13.0	12.0	9.5	8.5	9.0	8.5	8.0	8.0	10.5	10.0	11.0	10.5
25	12.0	12.0	10.0	9.5	9.0	9.0	8.0	8.0	10.5	10.5	12.0	9.5
26	12.0	11.5	10.0	10.0	9.0	8.5	8.5	8.0	10.5	10.5	12.0	11.5
27	11.5	11.0	10.0	10.0	8.5	8.0	8.5	8.0	10.0	9.5	13.0	11.5
28	11.0	10.5	10.0	10.0	8.0	8.0	8.5	8.0	9.5	9.0	13.0	12.0
29	10.5	10.5	10.0	10.0	8.0	8.0	8.5	8.5	---	---	13.0	12.0
30	10.5	10.0	10.0	10.0	8.0	8.0	8.5	8.0	---	---	12.0	12.0
31	10.0	10.0	---	---	8.0	8.0	8.5	8.0	---	---	13.0	11.0
MONTH	15.0	10.0	10.5	5.5	10.5	8.0	9.0	6.5	10.5	6.5	13.0	8.0

14307620 SIUSLAW RIVER NEAR MAPLETON, OR—Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.5	10.5	12.0	12.0	16.5	15.0	18.0	16.5	25.5	21.5	20.5	19.0
2	10.0	9.5	12.0	12.0	17.0	16.0	19.5	16.5	25.5	22.0	22.0	19.5
3	10.0	10.0	12.0	12.0	18.0	16.5	19.0	17.5	25.5	22.0	21.5	19.0
4	10.5	10.0	12.0	12.0	19.5	17.0	19.5	16.5	25.5	22.0	19.0	17.5
5	10.0	10.0	12.0	12.0	25.0	19.0	22.0	16.5	25.5	21.5	18.5	17.0
6	10.0	9.5	12.0	12.0	23.5	20.0	23.5	19.0	26.5	22.0	19.0	16.5
7	10.0	9.5	12.5	12.0	23.0	19.5	23.5	20.0	28.0	23.5	18.5	16.5
8	11.0	9.5	12.5	12.5	23.0	19.0	23.0	20.0	28.5	24.5	18.0	16.5
9	12.0	10.0	13.0	12.5	21.0	19.0	22.5	20.0	28.5	24.0	16.5	16.0
10	13.5	11.0	13.0	12.5	18.5	16.5	21.0	18.0	26.0	23.0	17.0	15.5
11	13.5	11.5	12.5	12.5	20.0	16.0	20.5	17.5	24.5	22.5	17.5	15.5
12	13.0	11.0	12.5	12.5	19.0	17.0	22.5	18.0	22.5	21.0	19.0	15.5
13	11.5	11.0	12.5	12.5	18.0	16.0	23.5	19.5	22.0	20.0	18.0	16.0
14	10.5	10.0	12.5	12.0	18.5	15.5	24.5	20.5	23.5	19.5	19.0	15.5
15	10.0	10.0	12.0	11.5	18.5	16.0	24.0	19.5	22.5	20.0	19.0	16.5
16	10.0	9.5	12.0	11.5	20.0	16.0	20.0	19.0	21.0	19.0	17.5	15.0
17	9.5	9.5	12.5	12.0	22.5	17.0	22.5	17.5	21.5	18.5	16.0	14.5
18	10.0	9.5	13.0	12.5	21.0	18.0	24.0	19.5	22.0	18.5	15.5	13.5
19	11.0	10.5	14.0	13.0	21.5	16.5	24.5	20.0	22.0	20.0	16.0	13.0
20	11.0	10.0	14.5	14.0	20.0	17.5	26.0	21.5	20.0	19.0	15.5	13.5
21	11.0	10.0	14.5	14.0	19.5	17.0	27.0	22.0	19.0	18.5	17.0	14.5
22	10.5	10.5	14.0	13.0	18.5	17.0	26.5	23.0	19.5	17.5	15.5	14.5
23	11.0	10.5	13.0	13.0	18.0	16.5	25.5	22.0	19.0	18.0	18.0	14.0
24	11.5	11.0	13.0	12.5	18.5	16.0	26.5	22.0	18.5	17.0	18.5	16.0
25	11.5	11.5	13.0	12.5	17.5	16.5	27.5	23.0	19.5	16.5	19.5	17.0
26	11.5	11.5	13.0	12.5	20.5	16.0	25.0	21.5	20.5	17.0	19.0	17.5
27	12.0	11.5	13.0	12.5	24.0	18.0	23.0	20.0	22.0	18.0	19.0	17.5
28	12.0	12.0	13.5	13.0	23.0	20.0	23.0	20.5	22.5	18.5	18.5	16.0
29	12.0	12.0	14.0	13.0	19.5	18.5	25.0	20.5	23.0	19.5	18.5	15.5
30	12.0	12.0	14.5	13.5	18.5	17.5	25.5	21.5	22.0	20.0	18.0	16.5
31	---	---	15.5	14.0	---	---	25.0	21.0	20.0	19.0	---	---
MONTH	13.5	9.5	15.5	11.5	25.0	15.0	27.5	16.5	28.5	16.5	22.0	13.0

14307645 NORTH FORK SIUSLAW RIVER NEAR MINERVA, OR

LOCATION.--Lat 44°02'50", long 124°00'10", in NW¼SW¼ sec.34, T.17 S., R.11 W., Lane County, Hydrologic Unit 17100206, on left bank 10 ft (3 m) downstream from county road bridge, 0.3 mi (0.5 km) upstream from Condon Creek, 2.7 mi (4.3 km) southwest of Minerva, and at mile 13.09 (21.06 km).

DRAINAGE AREA.--41.2 mi^2 (106.7 km^2).

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder, and crest-stage gage. Altitude of gage is 40 ft (12 m), from topographic map.

REMARKS.--Records good. No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--11 years, 296 ft^3/s (8.383 m^3/s), 97.57 in/yr (2,478 mm/yr), 214,500 acre-ft/yr (264 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,040 ft^3/s (86.1 m^3/s) Jan. 21, 1972, gage height, 23.01 ft (7.013 m); maximum gage height, 23.38 ft (7.126 m) Dec. 1, 1975 (backwater from debris); minimum discharge, 12 ft^3/s (0.34 m^3/s) Sept. 2, 3, 15-18, 1972, Aug. 12, 13, 17, 23, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft^3/s (51.0 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	0700	2,680	75.9	21.73	6.623	Dec. 13	2200	2,240	63.4	19.07	5.813
Dec. 2	2400	*2,760	78.2	*22.17	6.757	Jan. 6	0200	1,950	55.2	17.28	5.267

Minimum, 23 ft^3/s (0.65 m^3/s) Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	478	862	415	386	259	102	193	136	68	29	32
2	76	703	1810	404	585	233	161	174	127	68	28	34
3	68	454	2520	689	722	219	175	161	122	64	28	34
4	64	309	1790	1070	548	209	225	154	115	63	27	49
5	59	393	1100	1230	474	191	422	144	109	59	26	48
6	69	366	1140	1750	456	175	349	136	103	56	26	42
7	96	346	1040	1150	541	188	254	128	99	53	25	38
8	90	266	810	1030	621	190	207	121	94	52	25	45
9	77	213	672	1030	724	168	177	118	107	51	24	110
10	70	170	663	850	632	158	154	115	154	49	23	119
11	64	146	1150	705	523	154	138	[illegible]	151	49	23	86
12	61	138	1210	607	452	149	128	131	122	47	31	67
13	57	212	1930	549	388	168	121	254	129	46	36	60
14	55	678	2120	512	363	148	159	962	138	44	32	58
15	53	1240	2110	469	378	140	161	948	134	48	29	51
16	50	932	1790	564	348	136	179	609	123	62	31	46
17	48	582	1490	866	338	131	262	447	113	49	28	47
18	47	431	1180	894	353	125	581	356	106	44	26	64
19	46	320	928	827	329	120	503	294	101	42	25	53
20	44	247	745	902	300	114	452	252	94	40	35	49
21	43	211	613	928	273	110	483	221	91	39	41	47
22	42	611	513	904	250	106	875	203	87	37	33	47
23	76	707	557	745	230	119	820	188	85	36	31	52
24	117	1790	1070	616	224	143	577	186	83	36	75	46
25	147	2640	933	523	296	137	441	174	83	34	70	44
26	119	2300	719	447	399	121	359	181	79	33	58	42
27	98	1520	587	385	338	114	298	216	74	35	42	41
28	109	961	496	348	293	109	259	217	70	35	36	40
29	291	1160	499	307	---	105	228	180	71	34	33	38
30	442	898	543	277	---	101	215	161	69	31	31	38
31	484	---	476	292	---	97	---	146	---	30	32	---
TOTAL	3248	21422	34066	22285	11764	4637	9465	7923	3169	1434	1039	1567
MEAN	105	714	1099	719	420	150	316	256	106	46.3	33.5	52.2
MAX	484	2640	2520	1750	724	259	875	962	154	68	75	119
MIN	42	138	476	277	224	97	102	115	69	30	23	32
CFSM	2.55	17.3	26.7	17.5	10.2	3.64	7.67	6.21	2.57	1.12	.81	1.27
IN.	2.93	19.34	30.76	20.12	10.62	4.19	8.55	7.15	2.86	1.29	.94	1.41
AC-FT	6440	42490	67570	44200	23330	9200	18770	15720	6290	2840	2060	3110

CAL YR 1977 TOTAL 97384 MEAN 267 MAX 2640 MIN 12 CFSM 6.48 IN 87.93 AC-FT 193200
WTR YR 1978 TOTAL 122019 MEAN 334 MAX 2640 MIN 23 CFSM 8.11 IN 110.17 AC-FT 242000

14307700 JACKSON CREEK NEAR TILLER, OR

LOCATION.--Lat 42°57'15", long 122°49'40", in SW¼NE¼ sec.21, T.30 S., R.1 W., Douglas County, Hydrologic Unit 17100302, on right bank 0.5 mi (0.8 km) upstream from Chapman Creek, 0.8 mi (1.3 km) downstream from Beaver Creek, 6.5 mi (10.5 km) northeast of Tiller, and at mile 3.0 (4.8 km). Records include flow of Chapman Creek.

DRAINAGE AREA.--152 mi^2 (394 km^2), at cableway 0.6 mi (1.0 km) downstream where all discharge measurements are made.

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 1935: 1956-57(M).

GAGE.--Water-stage recorder. Datum of gage is 1,240.25 ft (378.028 m) National Geodetic Vertical Datum of 1929 (levels by Douglas County Water Resources Survey).

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--23 years, 319 ft^3/s (9.034 m^3/s), 28.50 in/yr (724 mm/yr), 231,100 acre-ft/yr (285 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,100 ft^3/s (598 m^3/s) Dec. 22, 1964, gage height, 18.0 ft (5.49 m), from floodmark, from rating curve extended above 5,100 ft^3/s (144 m^3/s) and basin runoff comparison; minimum, 11 ft^3/s (0.31 m^3/s) Jan. 6, 1977, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft^3/s (70.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 24	1230	*6,260	177	*9.62	2.932	Feb. 3	0800	2,510	71.1	6.28	1.914
Dec. 15	0300	2,980	84.4	6.78	2.067	Feb. 7	1430	2,540	71.9	6.32	1.926

Minimum, 17 ft^3/s (0.48 m^3/s) Oct. 19-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	99	664	521	255	248	248	338	133	79	31	32
2	41	119	654	483	438	223	242	309	127	105	30	30
3	34	107	1480	566	1930	206	226	287	120	127	29	29
4	29	87	1080	521	1130	209	255	265	116	113	29	30
5	26	119	804	670	876	226	312	236	112	97	29	38
6	28	203	654	659	799	278	345	209	105	85	28	57
7	33	147	629	566	1590	258	305	195	99	77	28	74
8	28	113	562	495	1450	341	268	187	94	72	27	68
9	25	93	474	552	1110	454	258	187	89	67	26	88
10	23	79	403	629	860	406	272	182	102	63	25	226
11	22	69	478	557	685	359	261	190	101	60	25	391
12	21	64	614	491	580	325	233	174	87	57	25	190
13	20	69	794	470	495	309	212	167	82	54	31	130
14	19	74	1440	478	422	284	192	170	77	52	29	128
15	19	133	2320	487	414	258	187	192	75	50	29	112
16	18	187	1360	1110	377	233	182	218	71	53	39	95
17	18	140	1330	1050	359	215	165	201	68	51	39	87
18	18	117	1030	824	410	203	154	185	74	48	32	105
19	17	101	769	745	450	198	153	177	77	46	29	106
20	17	85	609	769	483	198	153	172	69	45	28	93
21	17	120	504	707	483	206	165	165	65	43	42	81
22	17	876	450	721	458	236	192	156	61	42	64	73
23	18	914	508	639	430	258	258	147	59	41	50	67
24	19	4380	585	534	399	242	261	154	62	37	45	61
25	99	2820	517	462	369	212	281	182	71	36	158	57
26	110	2970	446	418	335	201	446	174	62	36	73	52
27	64	1540	466	369	305	201	521	172	59	35	51	49
28	49	1100	525	328	275	198	450	162	64	34	43	46
29	43	919	548	302	---	195	395	156	128	33	39	44
30	102	809	712	275	---	221	362	149	89	32	37	42
31	112	---	639	255	---	203	---	140	---	32	35	---
TOTAL	1158	18653	24048	17653	18167	7804	7954	5998	2598	1802	1225	2681
MEAN	37.4	622	776	569	649	252	265	193	86.6	58.1	39.5	89.4
MAX	112	4380	2320	1110	1930	454	521	338	133	127	158	391
MIN	17	64	403	255	255	195	153	140	59	32	25	29
CFSM	.25	4.09	5.11	3.74	4.27	1.66	1.74	1.27	.57	.38	.26	.59
IN.	.28	4.57	5.89	4.32	4.45	1.91	1.95	1.47	.64	.44	.30	.66
AC-FT	2300	37000	47700	35010	36030	15480	15780	11900	5150	3570	2430	5320

CAL YR 1977 TOTAL 73036 MEAN 200 MAX 4380 MIN 12 CFSM 1.32 IN 17.87 AC-FT 144900
WTR YR 1978 TOTAL 109741 MEAN 301 MAX 4380 MIN 17 CFSM 1.98 IN 26.86 AC-FT 217700

14308000 SOUTH UMPQUA RIVER AT TILLER, OR

LOCATION.--Lat 42°55'50", long 122°56'50", in NE¼ sec.33, T.30 S., R.2 W., Douglas County, Hydrologic Unit 17100302, on right bank 0.3 mi (0.5 km) upstream from bridge on State Highway 227 at Tiller, 0.3 mi (0.5 km) upstream from Elk Creek, and at mile 187.31 (301.38 km).

DRAINAGE AREA.--449 mi^2 (1,163 km^2).

PERIOD OF RECORD.--October 1910 to December 1911, October 1939 to current year. Monthly discharge only for some periods, published in WSP 1318. Prior to December 1911, published as South Fork of Umpqua River at Tiller.

REVISED RECORDS.--WSP 1448: 1911(M), 1912, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 991.8 ft (302.30 m) National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Oct. 1, 1939, nonrecording gage at site 0.2 mi (0.3 km) downstream at different datum.

REMARKS.--Records excellent. No regulation. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--40 years, 1,042 ft^3/s (29.51 m^3/s), 31.52 in/yr (801 mm/yr), 754,900 acre-ft/yr (931 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,200 ft^3/s (1,700 m^3/s) Dec. 22, 1964, gage height, 25.72 ft (7.839 m); minimum observed, 20 ft^3/s (0.57 m^3/s) Sept. 3, 4, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft^3/s (198 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 24	1400	*26,700	756	*16.94	5.163	Dec. 15	0030	13,100	371	11.91	3.630
Dec. 3	0630	9,540	270	10.20	3.109	Feb. 3	0900	12,300	348	11.58	3.530

Minimum, 58 ft^3/s (1.64 m^3/s) Oct. 21-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199	430	2350	1740	844	740	582	892	425	224	76	100
2	153	501	2490	1520	1580	691	617	809	404	255	76	93
3	126	469	7000	1620	9220	653	669	740	388	307	74	91
4	110	345	4310	1590	4500	638	740	685	376	279	73	89
5	100	345	2950	1830	3080	664	936	638	368	242	71	112
6	100	617	2390	1850	2620	740	1150	587	360	214	71	158
7	119	510	2510	1740	4070	685	1030	553	345	197	69	188
8	104	396	2220	1520	4700	809	880	524	326	182	67	191
9	91	322	1790	1520	3560	1060	803	519	311	171	64	220
10	84	269	1460	1670	2700	974	814	515	329	163	61	524
11	78	233	1540	1490	2120	880	791	529	352	155	59	797
12	74	214	1920	1330	1730	814	712	529	300	148	61	478
13	71	227	4740	1260	1440	803	653	510	283	140	67	345
14	69	286	8300	1250	1230	785	602	510	269	135	78	329
15	66	898	9610	1240	1240	723	582	664	259	131	73	290
16	64	1130	5260	2470	1150	669	582	746	246	138	88	249
17	62	691	5280	2830	1130	627	543	696	236	138	98	227
18	62	524	3930	2560	1370	597	515	627	233	126	89	269
19	59	425	2790	2220	1540	577	496	582	252	119	76	276
20	59	348	2140	2340	1560	567	510	557	227	115	71	239
21	59	392	1760	2280	1470	567	557	538	217	110	84	211
22	58	3140	1620	2660	1350	602	712	515	205	104	143	194
23	61	3010	1670	2240	1230	664	1100	478	199	102	143	180
24	76	18800	2180	1810	1130	718	1020	501	199	95	119	166
25	220	13700	1950	1520	1050	638	980	587	227	91	413	155
26	425	13700	1590	1380	955	597	1190	557	208	89	255	145
27	239	6370	1540	1200	880	577	1380	548	194	89	163	138
28	174	4360	1710	1080	803	562	1200	529	194	86	133	131
29	150	3380	1700	993	---	553	1050	501	376	84	119	126
30	348	2930	2310	905	---	587	955	473	259	82	108	121
31	451	---	2160	850	---	553	---	447	---	80	104	---
TOTAL	4111	78962	95170	52508	60252	21314	24351	18086	8567	4591	3246	6832
MEAN	133	2632	3070	1694	2152	688	812	583	286	148	105	228
MAX	451	18800	9610	2830	9220	1060	1380	892	425	307	413	797
MIN	58	214	1460	850	803	553	496	447	194	80	59	89
CFSM	.30	5.86	6.84	3.77	4.79	1.53	1.81	1.30	.64	.33	.23	.51
IN.	.34	6.54	7.88	4.35	4.99	1.77	2.02	1.50	.71	.38	.27	.57
AC-FT	8150	156600	188800	104100	119500	42280	48300	35870	16990	9110	6440	13550

CAL YR 1977 TOTAL 269124 MEAN 737 MAX 18800 MIN 36 CFSM 1.64 IN 22.30 AC-FT 533800
WTR YR 1978 TOTAL 377990 MEAN 1036 MAX 18800 MIN 58 CFSM 2.31 IN 31.32 AC-FT 749700

14308500 ELK CREEK NEAR DREW, OR

LOCATION.--Lat 42°53'25", long 122°55'00", in SW¼ sec.11, T.31 S., R.2 W., Douglas County, Hydrologic Unit 17100302, on right bank 100 ft (30 m) downstream from Dixon Creek, 0.1 mi (0.2 km) upstream from Drew Creek, 1.3 mi (2.1 km) northwest of Drew, 3.3 mi (5.3 km) southeast of Tiller, and at mile 4.1 (6.6 km).

DRAINAGE AREA.--54.4 mi² (140.9 km²).

PERIOD OF RECORD.--September 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,279.25 ft (389.915 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--24 years, 85.6 ft³/s (2.424 m³/s), 62,020 acre-ft/yr (76.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,880 ft³/s (251 m³/s) Dec. 22, 1964, gage height, 10.61 ft (3.234 m), from rating curve extended above 2,900 ft³/s (82.1 m³/s) on basis of slope-area measurement at gage height 10.34 ft (3.152 m); maximum gage height, 10.80 ft (3.292 m) Jan. 15, 1974; no flow at times in September 1974, and Aug. 16-22, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 11.8 ft (3.60 m), from floodmarks, probably for flood in January or November 1953, discharge, about 11,000 ft³/s (312 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 24	1100	*1,850	52.4	*6.43	1.960	Feb. 3	0630	1,090	30.9	5.61	1.710
Dec. 14	2130	1,800	51.0	6.38	1.945	Feb. 7	1230	1,570	44.5	6.15	1.875
Jan. 16	1130	1,460	41.3	6.03	1.838						

Minimum, 0.48 ft³/s (0.014 m³/s) Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	8.4	111	124	60	43	37	37	13	18	1.4	3.7
2	5.6	8.4	105	109	191	41	38	37	12	41	1.4	3.1
3	4.3	8.9	339	111	778	38	36	34	12	43	1.4	2.7
4	3.7	8.4	199	107	355	43	43	30	11	35	.95	2.7
5	3.1	16	135	255	223	51	63	28	10	25	.82	5.1
6	3.3	23	103	229	172	60	72	25	9.4	20	.82	10
7	4.7	22	103	180	752	53	75	23	8.9	17	.95	23
8	4.0	17	98	144	571	85	64	22	8.9	14	.82	17
9	3.3	13	82	142	423	142	57	21	8.4	12	.63	19
10	3.1	11	70	169	269	111	52	20	11	11	.55	60
11	2.7	8.9	131	142	199	94	46	19	12	9.4	.55	54
12	2.4	7.4	175	124	154	92	41	19	10	8.4	.55	31
13	2.4	7.4	211	115	124	89	37	17	9.4	7.9	1.1	23
14	2.4	7.0	837	103	103	80	34	18	8.4	6.5	.95	23
15	2.1	7.9	1020	133	105	70	34	19	8.4	6.5	1.1	22
16	2.1	15	489	824	94	63	34	21	7.4	7.4	1.9	17
17	2.1	11	571	514	89	57	29	18	7.0	7.0	2.1	17
18	2.1	10	327	335	111	52	27	17	8.4	5.6	1.9	43
19	2.1	8.9	202	252	109	47	25	15	11	5.1	1.4	38
20	2.1	7.4	147	199	105	42	24	14	8.4	4.7	.95	27
21	2.4	23	118	164	96	40	25	14	7.4	4.3	2.4	22
22	2.4	392	107	152	85	41	24	14	7.0	3.7	7.4	17
23	2.7	319	144	133	77	48	26	13	6.5	3.7	5.6	14
24	2.7	1180	199	111	69	63	24	16	7.0	3.1	5.1	13
25	9.4	678	159	96	61	56	26	23	8.4	2.7	26	11
26	17	673	124	90	56	51	36	19	7.0	2.4	12	10
27	8.9	367	154	78	52	44	46	18	6.0	2.4	7.9	9.4
28	6.5	233	167	70	47	41	41	17	14	1.9	5.6	8.4
29	5.1	175	149	64	---	38	36	15	29	1.9	4.7	7.9
30	10	142	183	59	---	42	36	14	27	1.9	4.3	7.4
31	11	---	157	54	---	36	---	14	---	1.9	4.0	---
TOTAL	143.1	4409.0	7116	5382	5530	1853	1188	631	314.3	334.4	107.24	561.4
MEAN	4.62	147	230	174	198	59.8	39.6	20.4	10.5	10.8	3.46	18.7
MAX	17	1180	1020	824	778	142	75	37	29	43	26	60
MIN	2.1	7.0	70	54	47	36	24	13	6.0	1.9	.55	2.7
AC-FT	284	8750	14110	10680	10970	3680	2360	1250	623	663	213	1110

CAL YR 1977 TOTAL 17220.63 MEAN 47.2 MAX 1180 MIN .00 AC-FT 34160
WTR YR 1978 TOTAL 27569.44 MEAN 75.5 MAX 1180 MIN .55 AC-FT 54680

14308600 SOUTH UMPQUA RIVER AT DAYS CREEK, OR

LOCATION.--Lat 42°58'05", long 123°09'60", in NW¼ sec.15, T.30 S., R.4 W., Douglas County, Hydrologic Unit 17100302, on left bank 0.3 mi (0.5 km) upstream from Days Creek, 0.4 mi (0.6 km) southeast of community of Days Creek, and at mile 170.2 (273.9 km).

DRAINAGE AREA.--641 mi^2 (1,660 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 738.55 ft (225.110 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. No regulation. Many small diversions above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,500 ft^3/s (807 m^3/s) Nov. 24, 1977, gage height, 18.32 ft (5.584 m); minimum, 31 ft^3/s (0.88 m^3/s) Sept. 15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft^3/s (340 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 24	1630	*28,500	807	*18.32	5.584	Feb. 3	1000	14,400	408	13.09	3.990
Dec. 15	0230	14,400	408	13.11	3.996						

Minimum, 48 ft^3/s (1.36 m^3/s) Aug. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	265	489	2550	2130	1010	880	659	1010	395	234	75	99
2	204	498	2620	1830	1470	820	718	907	379	265	70	93
3	173	550	7370	1890	11000	780	768	820	356	316	69	87
4	152	411	4960	1880	5910	761	860	749	342	297	68	84
5	135	375	3310	2400	3840	780	1080	694	332	257	67	104
6	127	630	2600	2430	3230	907	1410	630	319	227	65	147
7	147	614	2670	2250	5120	826	1340	586	307	204	63	185
8	149	475	2480	1940	6400	927	1130	550	288	192	61	194
9	127	387	2030	1830	4920	1300	998	536	277	179	57	220
10	117	329	1690	2090	3520	1230	977	536	283	170	53	471
11	109	288	1660	1860	2740	1090	948	531	322	161	50	900
12	103	262	2220	1670	2270	1060	860	550	277	154	50	565
13	98	249	4390	1540	1900	1030	780	516	257	147	54	383
14	93	307	8620	1530	1590	1020	712	512	241	139	68	349
15	89	664	11400	1490	1590	934	670	647	234	134	71	322
16	86	1370	6380	3560	1460	853	700	755	225	142	76	274
17	82	826	6650	3820	1410	806	636	724	215	144	97	246
18	81	608	4940	3260	1660	749	592	641	211	132	95	304
19	79	498	3320	2760	1860	712	565	586	232	124	80	332
20	76	407	2550	2800	1860	682	570	555	217	117	70	283
21	77	449	2120	2670	1760	670	608	526	204	113	77	246
22	76	3610	1940	3110	1620	700	742	502	196	108	124	222
23	78	3790	1930	2750	1490	768	1180	466	188	103	152	206
24	91	19000	2450	2250	1370	900	1160	480	190	98	130	190
25	139	14300	2330	1890	1270	813	1090	581	208	94	322	179
26	512	15500	1910	1700	1160	730	1250	555	202	91	310	166
27	316	7070	1770	1490	1060	694	1520	536	187	87	177	156
28	232	5020	2090	1340	962	670	1350	512	177	86	140	147
29	196	3720	1950	1230	---	647	1190	480	352	84	120	139
30	285	3230	2590	1120	---	694	1060	453	280	80	108	134
31	507	---	2570	1030	---	653	---	423	---	77	101	---
TOTAL	5001	85926	108060	65540	75452	26086	28123	18549	7893	4756	3120	7427
MEAN	161	2864	3486	2114	2695	841	937	598	263	153	101	248
MAX	512	19000	11400	3820	11000	1300	1520	1010	395	316	322	900
MIN	76	249	1660	1030	962	647	565	423	177	77	50	84
CFSM	.25	4.47	5.44	3.30	4.20	1.31	1.46	.93	.41	.24	.16	.39
IN.	.29	4.99	6.27	3.80	4.38	1.51	1.63	1.08	.46	.28	.18	.43
AC-FT	9920	170400	214300	130000	149700	51740	55780	36790	15660	9430	6190	14730

CAL YR 1977 TOTAL 307256 MEAN 842 MAX 19000 MIN 31 CFSM 1.31 IN 17.83 AC-FT 609400
WTR YR 1978 TOTAL 435933 MEAN 1194 MAX 19000 MIN 50 CFSM 1.86 IN 25.30 AC-FT 864700

14308600 SOUTH UMPQUA RIVER AT DAYS CREEK, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1971 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: October 1970 to current year.
TURBIDITY: November 1972 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: Maximum, 30.0°C July 25, 1978; minimum, 0.0°C Dec. 8, 10-14, 17, 18, 1972, Feb. 5-8, Dec. 21, 22, 1976, Jan. 7-12, 27-30, 1977.
TURBIDITY: Maximum, 900 JTU Jan. 16, 1974; minimum, 0 JTU on many days during 1973, 1974, Jan. 13-16, 1978.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum, 30.0°C July 25; minimum, 1.5°C Nov. 21.
TURBIDITY: Maximum recorded, 140 JTU Nov. 24, but may have been higher on Nov. 24 after pump stopped operating; minimum, 0 JTU Jan. 13-16.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	IRON, DIS-SOLVED (UG/L AS FE)	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
DEC											
19...	1200	581	5.5	--	61	180	18	6.4	1.7	2.8	.6
APR											
20...	1100	565	10.3	7.7	100	50	16	9.3	2.3	3.9	.6
JUL											
18...	1015	132	19.0	7.9	117	30	12	12	3.2	6.3	1.0

DATE	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)
DEC										
19...	21	5.1	2.1	.1	--	.05	23	2	49	76.9
APR										
20...	36	3.0	2.5	.1	.01	.02	33	0	59	90.0
JUL										
18...	38	9.1	6.0	.1	.05	.00	43	5	73	26.0

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.5	12.5	11.0	10.0	7.5	7.0	---	---	7.0	6.0	6.0	5.0
2	14.5	13.0	11.5	9.5	8.5	7.0	---	---	6.0	6.0	5.5	4.5
3	14.5	12.0	10.0	8.0	9.0	8.5	---	---	7.5	6.0	7.0	5.0
4	16.0	12.0	8.0	7.0	9.0	8.5	---	---	7.5	7.0	9.0	7.0
5	16.5	13.0	8.0	7.5	8.5	7.0	6.5	6.5	8.0	7.5	9.0	8.0
6	15.0	13.5	9.0	7.5	8.0	6.5	7.0	6.5	8.0	7.0	9.5	7.5
7	15.0	12.5	9.5	8.0	8.0	7.0	6.5	5.5	7.5	7.0	9.0	8.5
8	14.0	12.0	9.0	7.0	7.0	5.0	7.0	6.0	7.0	6.5	9.0	8.0
9	15.0	12.5	7.0	5.5	5.0	4.5	7.5	7.0	7.0	6.5	8.5	8.0
10	15.5	12.0	6.5	5.5	6.0	5.0	8.0	7.0	6.5	5.0	8.0	7.5
11	16.0	12.0	7.0	5.5	7.0	6.0	7.0	6.0	5.0	4.5	8.0	7.0
12	15.5	12.5	7.5	5.5	7.0	7.0	7.0	6.0	5.0	4.0	8.0	7.0
13	15.5	13.0	8.5	6.5	8.5	7.0	7.5	7.0	5.0	4.5	7.5	6.5
14	16.0	13.5	8.5	7.5	9.0	8.5	8.0	7.5	6.0	5.0	7.5	6.0
15	16.0	13.5	9.0	8.0	8.5	6.5	8.0	7.0	6.5	5.5	7.5	6.0
16	15.0	13.5	9.5	8.0	6.5	6.0	7.5	7.0	5.5	5.0	8.5	6.0
17	15.5	13.0	8.5	7.0	6.0	6.0	7.5	7.5	5.5	4.5	9.5	6.5
18	15.5	13.5	6.5	5.0	6.0	6.0	---	---	7.0	5.5	10.5	7.5
19	15.5	14.0	5.5	3.5	6.0	5.0	---	---	8.0	6.5	11.5	8.5
20	14.0	12.5	3.5	2.0	---	---	---	---	8.0	6.5	12.0	9.0
21	14.0	12.0	2.5	1.5	---	---	---	---	8.0	7.0	12.0	9.5
22	14.0	12.0	5.0	2.0	---	---	---	---	8.5	7.5	12.5	10.5
23	13.5	12.5	5.5	4.5	---	---	---	---	8.0	7.0	11.5	10.0
24	15.0	12.5	7.0	5.5	---	---	---	---	8.5	7.5	10.0	8.5
25	14.5	13.0	7.5	7.0	---	---	---	---	8.5	7.5	10.5	8.0
26	13.0	12.0	8.0	7.5	---	---	---	---	8.0	7.0	11.0	9.5
27	12.0	11.0	8.0	7.5	---	---	---	---	8.0	6.5	13.0	10.5
28	12.0	10.5	8.0	7.5	---	---	---	---	7.0	5.5	13.5	11.0
29	12.0	10.0	8.5	7.5	---	---	---	---	---	---	12.5	11.5
30	11.5	10.5	8.5	7.5	---	---	---	---	---	---	12.5	11.0
31	11.0	10.0	---	---	---	---	---	---	---	---	12.0	11.0
MONTH	16.5	10.0	11.5	1.5	9.0	4.5	8.0	5.5	8.5	4.0	13.5	4.5

14308600 SOUTH UMPQUA RIVER AT DAYS CREEK, OR—Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	APRIL MAX	APRIL MIN	MAY MAX	MAY MIN	JUNE MAX	JUNE MIN	JULY MAX	JULY MIN	AUGUST MAX	AUGUST MIN	SEPTEMBER MAX	SEPTEMBER MIN
1	11.0	9.5	11.5	9.5	20.0	15.5	18.0	17.5	26.5	21.5	24.5	18.5
2	10.0	8.5	13.0	10.0	21.0	16.5	19.5	17.0	27.0	21.5	24.5	19.5
3	9.5	8.0	13.5	11.0	22.0	17.5	18.0	17.0	27.0	22.0	23.0	20.0
4	9.5	8.0	12.0	10.0	23.0	18.5	20.5	16.5	26.5	22.5	20.0	18.5
5	9.0	8.0	11.5	8.5	24.0	19.5	22.0	17.5	26.5	21.5	18.0	17.5
6	8.0	7.0	12.5	9.0	24.5	20.5	24.0	18.5	27.5	22.0	18.0	16.0
7	8.0	6.5	14.0	10.0	23.5	19.5	23.5	20.0	28.5	23.0	18.5	15.5
8	9.5	7.0	15.5	11.5	24.0	20.0	24.0	19.5	29.0	24.0	17.5	16.0
9	11.0	8.0	16.5	13.5	21.0	18.5	21.0	19.0	28.5	24.0	16.5	15.0
10	12.5	9.5	14.5	13.0	19.0	17.5	23.0	18.0	27.0	23.0	16.0	15.0
11	12.5	10.5	14.5	12.0	20.5	16.5	24.0	18.0	27.0	23.0	16.0	14.0
12	11.5	9.5	13.0	11.5	20.0	18.0	25.0	19.0	25.5	22.0	16.0	13.5
13	10.0	9.0	13.5	11.0	20.0	18.0	26.5	20.5	23.0	20.5	15.0	14.0
14	9.0	8.0	13.5	12.0	20.0	17.0	28.0	22.0	25.0	19.5	16.0	13.5
15	8.5	8.0	12.5	11.0	20.5	16.5	25.5	22.5	23.5	20.5	17.0	14.0
16	9.5	7.0	13.5	11.0	22.0	17.0	24.5	21.0	21.5	19.5	16.0	14.0
17	9.5	7.0	14.0	11.0	23.0	17.0	24.0	20.0	22.5	18.5	15.5	13.5
18	10.0	7.5	16.0	12.0	20.5	19.0	24.5	19.0	23.5	18.0	14.5	12.5
19	11.0	8.5	17.5	14.0	22.5	18.0	26.0	19.5	24.0	19.0	15.0	11.5
20	10.0	8.5	18.0	15.0	24.0	19.0	27.0	20.5	23.0	19.5	15.5	12.0
21	10.0	8.0	16.5	13.0	22.5	20.0	28.5	21.0	20.0	18.5	15.5	13.0
22	9.5	8.0	15.0	12.0	21.5	18.5	29.0	22.0	20.5	18.0	17.0	12.5
23	8.5	7.0	14.0	12.0	19.5	18.0	29.0	23.5	19.5	17.5	18.0	13.0
24	10.0	8.0	12.5	11.0	19.5	17.0	29.5	23.5	18.5	17.0	19.0	14.0
25	10.5	9.0	12.5	10.5	20.5	16.5	30.0	24.0	19.5	16.5	18.5	15.5
26	10.0	9.0	12.5	11.0	21.5	17.0	29.0	25.0	20.5	16.0	19.5	15.0
27	10.5	9.0	14.0	11.5	24.0	17.0	26.5	22.0	22.0	17.5	19.5	16.0
28	11.0	10.0	15.5	13.5	23.0	19.5	27.0	21.5	23.0	17.5	19.5	15.0
29	12.0	9.5	17.5	14.0	21.5	19.0	27.5	22.0	24.0	18.5	19.0	14.5
30	11.0	10.0	18.0	14.0	19.0	18.0	27.5	22.5	22.0	20.0	19.0	15.0
31	---	---	19.0	14.5	---	---	27.0	22.0	23.5	19.5	---	---
MONTH	12.5	6.5	19.0	8.5	24.5	15.5	30.0	16.5	29.0	16.0	24.5	11.5

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER MAX	OCTOBER MIN	OCTOBER MEAN	NOVEMBER MAX	NOVEMBER MIN	NOVEMBER MEAN	DECEMBER MAX	DECEMBER MIN	DECEMBER MEAN	JANUARY MAX	JANUARY MIN	JANUARY MEAN
1	7	3	4	3	2	2	25	10	15	---	---	---
2	3	1	2	5	2	3	15	10	10	---	---	---
3	1	1	1	4	2	3	110	10	60	---	---	---
4	1	1	1	2	1	2	40	15	25	---	---	---
5	1	1	1	2	1	1	20	10	15	15	1	10
6	1	1	1	4	1	3	10	8	9	6	1	3
7	1	1	1	5	3	4	65	9	10	1	1	1
8	1	1	1	3	2	3	15	7	9	1	1	1
9	3	1	1	2	1	2	9	6	7	1	1	1
10	1	1	1	2	1	1	7	6	6	1	1	1
11	1	1	1	1	1	1	10	5	6	1	1	1
12	2	1	1	1	1	1	15	8	10	1	1	1
13	2	1	1	1	1	1	50	8	20	1	0	1
14	1	1	1	1	1	1	80	40	60	1	0	0
15	2	1	1	10	1	2	75	25	45	1	0	0
16	1	1	1	20	8	15	25	15	20	85	0	50
17	1	1	1	8	4	6	15	15	15	---	---	---
18	1	1	1	4	3	3	25	10	15	---	---	---
19	1	1	1	3	2	2	30	1	10	---	---	---
20	1	1	1	2	1	2	2	0	1	---	---	---
21	1	1	1	6	1	2	---	---	---	---	---	---
22	1	1	1	90	4	50	---	---	---	---	---	---
23	2	1	1	60	25	35	---	---	---	---	---	---
24	1	1	1	140	---	---	---	---	---	---	---	---
25	1	1	1	---	---	---	---	---	---	---	---	---
26	4	1	2	---	---	---	---	---	---	---	---	---
27	3	2	2	---	---	---	---	---	---	---	---	---
28	3	2	2	---	---	---	---	---	---	---	---	---
29	2	1	1	---	---	---	---	---	---	---	---	---
30	8	1	2	---	---	---	---	---	---	---	---	---
31	6	1	2	---	---	---	---	---	---	---	---	---
MONTH	8	1	1	140	1	6	110	0	20	85	0	6

14308600 SOUTH UMPQUA RIVER AT DAYS CREEK, OR--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	2	2	2	1	1	1	3	2	2
2	50	4	10	2	2	2	1	1	1	3	2	2
3	130	30	80	2	1	2	2	1	2	2	2	2
4	30	10	20	2	1	2	3	2	2	2	1	2
5	15	8	10	2	2	2	8	3	6	2	1	1
6	15	6	9	4	2	3	10	8	10	2	1	1
7	55	5	20	4	2	3	15	10	10	1	1	1
8	35	10	15	3	2	2	10	8	9	2	1	1
9	15	10	10	8	3	6	8	6	7	2	1	1
10	10	8	9	7	5	6	6	5	5	2	1	1
11	8	7	7	6	4	5	5	4	4	1	1	1
12	7	6	6	5	4	4	4	3	3	1	1	1
13	6	5	6	7	4	4	3	3	3	1	1	1
14	15	6	6	5	4	5	3	2	3	2	1	1
15	9	6	7	15	4	5	2	2	2	1	1	1
16	7	6	6	5	3	4	2	2	2	2	1	1
17	6	6	6	4	3	3	2	2	2	3	1	1
18	8	6	8	4	2	3	2	2	2	1	1	1
19	10	6	7	3	2	2	2	1	1	1	1	1
20	6	5	6	4	1	2	1	1	1	1	1	1
21	5	4	5	2	1	2	2	1	1	5	1	1
22	4	4	4	2	1	1	2	1	2	1	1	1
23	5	3	4	3	1	2	6	2	4	25	1	2
24	4	3	3	3	2	3	7	5	6	1	1	1
25	4	3	3	2	2	2	7	4	5	1	1	1
26	3	2	3	2	2	2	5	4	4	45	1	3
27	3	2	2	2	1	1	20	5	6	1	1	1
28	3	2	2	1	1	1	6	4	4	1	1	1
29	---	---	---	1	1	1	4	3	3	1	1	1
30	---	---	---	2	1	1	3	3	3	2	1	1
31	---	---	---	1	1	1	---	---	---	1	1	1
MONTH	130	2	10	15	1	3	20	1	4	45	1	1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1	1	1	15	7	10	1	1	1			
2	1	1	1	8	3	5	1	1	1			
3	1	1	1	3	2	3	1	1	1			
4	1	1	1	3	2	2	1	1	1			
5	1	1	1	2	1	2	1	1	1			
6	1	1	1	1	1	1	1	1	1			
7	1	1	1	1	1	1	1	1	1			
8	1	1	1	1	1	1	1	1	1			
9	1	1	1	1	1	1	1	1	1			
10	1	1	1	1	1	1	1	1	1			
11	2	1	1	1	1	1	1	1	1			
12	1	1	1	1	1	1	1	1	1			
13	1	1	1	1	1	1	1	1	1			
14	1	1	1	1	1	1	1	1	1			
15	1	1	1	1	1	1	1	1	1			
16	1	1	1	1	1	1	1	1	1			
17	1	1	1	1	1	1	1	1	1			
18	1	1	1	1	1	1	1	1	1			
19	1	1	1	1	1	1	1	1	1			
20	1	1	1	1	1	1	1	1	1			
21	1	1	1	1	1	1	2	1	1			
22	1	1	1	1	1	1	1	1	1			
23	1	1	1	1	1	1	1	1	1			
24	1	1	1	1	1	1	1	1	1			
25	1	1	1	1	1	1	8	1	2			
26	1	1	1	1	1	1	4	1	2			
27	1	1	1	1	1	1	2	1	1			
28	1	1	1	1	1	1	2	1	1			
29	35	1	10	1	1	1	---	---	---			
30	15	7	10	1	1	1	---	---	---			
31	---	---	---	1	1	1	---	---	---			
MONTH	35	1	2	15	1	2	8	1	1			

14309000 COW CREEK NEAR AZALEA, OR

LOCATION.--Lat 42°49'30", long 123°10'40", in N½ sec.4, T.32 S., R.4 W., Douglas County, Hydrologic Unit 17100302, on right bank 0.8 mi (1.3 km) upstream from Whitehorse Creek, 4.5 mi (7.2 km) northeast of Azalea, and at mile 58.2 (93.6 km).

DRAINAGE AREA.--78.0 mi^2 (202.0 km^2).

PERIOD OF RECORD.--April 1926 to September 1928 (no winter records), April 1929 to December 1931, April 1932 to current year.

REVISED RECORDS.--WSP 984: 1933-36. WSP 1154: 1946(M), 1948(M). WSP 1448: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,694.32 ft (516.429 m) National Geodetic Vertical Datum of 1929 (Douglas County Road Department bench mark). Prior to July 19, 1949, nonrecording gage at same site and datum.

REMARKS.--Records fair. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--48 years (water years 1930-31, 1933-78), 111 ft^3/s (3.144 m^3/s), 19.33 in/yr (491 mm/yr), 80,420 acre-ft/yr (99.2 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft^3/s (300 m^3/s) Jan. 15, 1974, gage height, 16.40 ft (4.999 m), from high-water mark in well; minimum recorded, 1.2 ft^3/s (0.034 m^3/s) Sept. 2, 1970, but may have been less during period of no gage-height record Sept. 4-30, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft^3/s (36.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	unknown	1,590	45.0	6.83	2.082
Dec. 14	unknown	unknown		-	-
Jan. 16	1300	*1,940	54.9	*7.70	2.347
Feb. 3	0730	1,870	53.0	7.54	2.298
Feb. 7	1400	1,930	54.7	7.68	2.341

Minimum, 5.6 ft^3/s (0.16 m^3/s) Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	18	75	150	121	89	68	63	30	32	13	13
2	12	18	60	139	320	84	68	59	29	45	12	11
3	10	18	70	152	1350	81	65	55	27	46	12	10
4	9.8	16	70	165	580	87	74	52	26	37	10	11
5	9.4	26	65	439	363	89	89	51	25	31	11	21
6	9.8	30	55	334	286	93	98	48	23	27	11	39
7	12	27	55	252	913	84	89	46	22	24	8.9	35
8	10	22	50	212	813	97	81	44	21	23	8.9	30
9	8.4	19	48	209	701	132	76	42	21	22	8.4	30
10	8.1	18	44	214	415	113	73	42	26	21	8.9	91
11	7.8	16	60	190	311	113	67	41	27	21	9.5	77
12	7.8	14	150	171	258	124	63	40	23	19	12	52
13	7.5	11	240	171	218	119	61	39	22	19	16	37
14	7.5	9.5	650	165	192	111	60	40	21	18	17	37
15	7.5	10	600	171	189	102	62	51	21	18	17	36
16	7.5	10	450	1060	167	95	62	51	20	23	19	30
17	7.8	10	480	651	155	89	58	43	19	21	18	26
18	7.8	9.5	295	415	155	84	56	39	21	18	15	32
19	7.8	9.0	207	343	153	79	56	37	26	15	13	46
20	7.8	8.5	165	280	153	73	58	35	24	14	13	35
21	8.1	14	139	256	146	71	57	35	21	13	20	29
22	8.1	130	129	240	136	68	56	34	19	13	29	26
23	9.4	110	194	212	124	87	64	34	18	13	20	24
24	11	500	252	189	116	107	60	45	20	13	19	23
25	19	650	201	167	110	87	60	53	21	13	45	21
26	27	550	167	155	104	80	63	43	19	14	36	20
27	17	300	181	139	99	74	62	40	18	13	23	19
28	14	200	194	127	93	69	58	36	19	13	18	17
29	15	120	171	117	---	68	57	35	38	13	14	17
30	24	95	194	108	---	74	59	33	38	13	13	16
31	23	---	175	102	---	66	---	32	---	13	14	---
TOTAL	355.9	2988.5	5886	7695	8741	2789	1980	1338	705	638	504.6	911
MEAN	11.5	99.6	190	240	312	90.0	66.0	43.2	23.5	20.6	16.3	30.4
MAX	27	650	650	1060	1350	132	98	63	38	46	45	91
MIN	7.5	8.5	44	102	93	66	56	32	18	13	8.4	10
CFSM	.15	1.28	2.44	3.18	4.00	1.15	.85	.55	.30	.26	.21	.39
IN.	.17	1.43	2.81	3.67	4.17	1.33	.94	.64	.34	.30	.24	.43
AC-FT	706	5930	11670	15260	17340	5530	3930	2650	1400	1270	1000	1810

CAL YR 1977 TOTAL 16425.1 MEAN 45.0 MAX 650 MIN 4.4 CFSM .58 IN 7.83 AC-FT 32580
WTR YR 1978 TOTAL 34532.0 MEAN 94.6 MAX 1350 MIN 7.5 CFSM 1.21 IN 16.47 AC-FT 68490

NOTE.--No gage-height record Nov. 11 to Dec. 16.

14309500 WEST FORK COW CREEK NEAR GLENDALE, OR

LOCATION.--Lat 42°48'15", long 123°36'35", in SW¼NE¼ sec.11, T.32 S., R.8 W., Douglas County, Hydrologic Unit 17100302, on left bank 1.6 mi (2.6 km) downstream from Bear Creek, 11 mi (18 km) northwest of Glendale, and at mile 0.8 (1.3 km).

DRAINAGE AREA.--86.9 mi^2 (225.1 km^2).

PERIOD OF RECORD.--August 1955 to current year.

REVISED RECORDS.--WSP 1738: 1956, drainage area (former site). WSP 1935: 1956.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,000 ft (305 m), from topographic map. Prior to June 8, 1964, at site 0.6 mi (1.0 km) upstream at different datum.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--23 years, 276 ft^3/s (7.816 m^3/s), 43.13 in/yr (1,096 mm/yr), 200,000 acre-ft/yr (247 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft^3/s (445 m^3/s) Dec. 22, 1964, gage height, 18.59 ft (5.666 m), from floodmark, from rating curve extended above 2,600 ft^3/s (73.6 m^3/s) on basis of slope-area measurement of peak flow; minimum, 3.7 ft^3/s (0.11 m^3/s) Aug. 17, 19, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft^3/s (70.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 22	1330	3,010	85.2	8.10	2.469	Jan. 5	1530	*4,230	120	*9.28	2.829
Nov. 24	1530	3,340	94.6	8.42	2.566	Jan. 16	0830	3,310	93.7	8.40	2.560
Dec. 14	2000	3,000	85.0	8.10	2.469	Feb. 3	0130	4,020	114	9.08	2.768

Minimum, 10 ft^3/s (0.28 m^3/s) Aug. 9-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	70	221	530	254	148	109	178	63	26	12	13
2	39	62	193	425	1260	139	139	157	60	29	11	13
3	31	62	467	601	2860	137	148	143	56	27	11	12
4	27	88	383	920	1220	135	159	131	53	26	12	19
5	23	335	289	2550	788	143	340	123	51	24	11	60
6	22	299	235	1900	660	137	410	111	48	23	11	53
7	23	178	215	1050	1240	137	281	101	46	22	11	45
8	21	125	204	885	1470	224	218	96	44	21	11	34
9	18	93	181	899	1330	232	181	93	41	22	10	150
10	17	75	161	697	906	212	161	89	46	22	10	365
11	16	67	296	557	642	193	143	89	47	21	10	164
12	15	58	520	465	500	178	127	83	41	21	11	89
13	15	62	1090	401	439	171	117	80	43	21	12	64
14	14	64	2080	439	323	157	131	88	40	20	12	53
15	14	72	2400	565	352	148	150	286	39	19	12	40
16	14	105	1410	2330	352	137	173	304	38	21	12	36
17	13	89	1270	1520	361	131	244	207	35	21	12	32
18	12	78	857	1070	420	123	263	171	33	19	12	46
19	12	70	579	830	396	113	300	141	34	18	11	47
20	12	59	444	684	344	103	401	125	33	17	11	37
21	12	82	361	684	296	98	356	109	32	17	12	32
22	12	2040	307	802	254	93	449	98	32	16	14	30
23	14	1600	1340	636	229	178	557	91	31	16	14	28
24	19	2390	1730	500	209	292	425	98	32	15	26	25
25	28	1570	892	392	196	229	344	107	32	14	64	24
26	37	1420	590	327	178	193	311	93	31	14	26	23
27	32	729	495	278	166	166	254	85	29	13	20	21
28	28	475	444	247	154	146	221	78	27	13	17	20
29	31	344	465	215	---	133	196	74	26	12	16	19
30	142	260	885	196	---	121	191	70	25	12	15	19
31	100	---	722	181	---	113	---	66	---	12	14	---
TOTAL	869	13021	21726	23776	17799	4860	7499	3765	1188	594	463	1613
MEAN	28.0	434	701	767	636	157	250	121	39.6	19.2	14.9	53.8
MAX	142	2390	2400	2550	2860	292	557	304	63	29	64	365
MIN	12	58	161	181	154	93	109	66	25	12	10	12
CFSM	.32	4.99	8.07	8.83	7.32	1.81	2.88	1.39	.46	.22	.17	.62
IN.	.37	5.57	9.30	10.18	7.62	2.08	3.21	1.61	.51	.25	.20	.69
AC-FT	1720	25830	43090	47160	35300	9640	14870	7470	2360	1180	918	3200

CAL YR 1977 TOTAL 56483.0 MEAN 155 MAX 2400 MIN 4.0 CFSM 1.78 IN 24.18 AC-FT 112000
WTR YR 1978 TOTAL 97173.0 MEAN 266 MAX 2860 MIN 10 CFSM 3.06 IN 41.60 AC-FT 192700

14310000 COW CREEK NEAR RIDDLE, OR

LOCATION.—Lat 42°55'25", long 123°25'40", in NE¼ sec.32, T.30 S., R.6 W., Douglas County, Hydrologic Unit 17100302, on left bank 0.4 mi (0.6 km) upstream from Council Creek, 3.8 mi (6.1 km) southwest of Riddle, and at mile 6.7 (10.8 km).

DRAINAGE AREA.—456 mi^2 (1,181 km^2).

PERIOD OF RECORD.—September 1954 to current year.

REVISED RECORDS.—WSP 1935: 1956(M).

GAGE.—Water-stage recorder. Datum of gage is 682.60 ft (208.056 m) National Geodetic Vertical Datum of 1929.

REMARKS.—Records excellent. No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.—24 years, 898 ft^3/s (25.43 m^3/s), 650,600 acre-ft/yr (802 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 38,400 ft^3/s (1,090 m^3/s) Jan. 15, 1974, gage height, 28.17 ft (8.586 m); minimum, 7.4 ft^3/s (0.21 m^3/s) Aug. 17-19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Oct. 29, 1950, reached a stage of about 28.5 ft (8.69 m), present site and datum, from slope-area measurement, discharge, 41,100 ft^3/s (1,160 m^3/s).

EXTREMES FOR CURRENT YEAR.—Peak discharges above base of 10,000 ft^3/s (283 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Jan. 5	1800	11,200	317	12.28	3.743	Feb. 3	0930	*13,400	379	*13 35	4.221
Jan. 16	1400	12,800	362	13.41	4.087						

Minimum, 24 ft^3/s (0.68 m^3/s) Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	168	175	697	1650	746	548	410	519	179	107	35	45
2	120	146	606	1320	2410	519	446	460	165	110	33	44
3	95	143	997	1360	11300	499	453	420	152	113	32	43
4	82	137	1040	2020	5280	465	512	410	143	118	32	50
5	74	479	811	6600	3100	519	782	390	134	107	31	107
6	70	577	684	6160	2330	526	1170	370	128	98	30	143
7	72	392	612	3310	3650	492	982	360	120	88	30	120
8	66	293	562	2450	6000	606	789	340	118	84	28	110
9	61	229	512	2300	5530	725	657	330	115	84	26	149
10	58	186	459	2080	3650	732	585	330	123	82	25	895
11	55	159	533	1780	2560	677	519	310	131	80	24	606
12	53	140	1040	1600	2010	664	459	310	123	76	25	317
13	50	131	1630	1440	1620	644	428	300	118	74	26	213
14	48	143	3650	1420	1300	619	428	340	113	66	30	168
15	47	137	6470	1600	1260	577	465	460	110	65	31	137
16	45	166	4080	8860	1180	533	492	562	107	66	30	120
17	43	186	4190	6400	1150	499	570	422	102	68	32	107
18	43	165	2900	3860	1220	472	577	348	100	65	32	137
19	43	152	1880	3050	1220	440	570	307	102	59	30	159
20	43	137	1370	2440	1130	404	711	278	105	58	28	134
21	43	165	1100	2180	1030	386	677	255	100	55	31	115
22	43	3290	952	2300	919	370	684	242	98	50	36	102
23	45	4140	2850	1990	834	446	935	229	95	47	43	95
24	55	6100	4890	1640	774	872	818	242	98	43	45	93
25	65	4750	2750	1370	718	746	711	293	100	41	118	86
26	82	4050	1830	1170	664	638	811	269	98	41	100	84
27	95	2310	1490	1010	625	562	732	246	93	40	86	78
28	91	1510	1470	903	585	499	644	225	88	40	66	76
29	84	1080	1360	811	---	465	570	213	102	40	58	78
30	193	849	2220	732	---	459	533	197	102	38	51	74
31	233	---	2180	684	---	428	---	186	---	37	47	---
TOTAL	2365	32537	57815	76490	64795	17051	19120	10163	3462	2140	1271	4685
MEAN	76.3	1085	1865	2467	2314	550	637	328	115	69.0	41.0	156
MAX	233	6100	6470	8860	11300	872	1170	562	179	118	118	895
MIN	43	131	459	684	585	370	410	186	88	37	24	43
AC-FT	4690	64540	114700	151700	128500	33820	37920	20160	6870	4240	2520	9290

CAL YR 1977 TOTAL 141587.7 MEAN 388 MAX 6470 MIN 7.8 AC-FT 280800
WTR YR 1978 TOTAL 291894.0 MEAN 800 MAX 11300 MIN 24 AC-FT 579000

14311000 NORTH MYRTLE CREEK NEAR MYRTLE CREEK, OR

LOCATION (REVISED).--Lat 43°02'30", long 123°15'30", in SW¼ sec.14, T.29 S., R.5 W., Douglas County, Hydrologic Unit 17100302, on left bank 300 ft (91 m) downstream from Bilger Creek, 1.5 mi (2.4 km) northeast of town of Myrtle Creek, and at mile 2.2 (3.5 km).

DRAINAGE AREA.--54.2 mi² (140.4 km²).

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 1738: 1957.

GAGE.--Water-stage recorder. Datum of gage is 642.81 ft (195.928 m) National Geodetic Vertical Datum of 1929 (levels by City Engineer of Myrtle Creek). Oct. 1, 1955, to Aug. 31, 1977, at site 340 ft (104 m) downstream on right bank. Oct. 1, 1955, to Sept. 30, 1975, at datum 1.63 ft (0.497 m) lower and Oct. 1, 1975, to Aug. 31, 1977, at datum 1.33 ft (0.405 m) lower.

REMARKS.--Records good. No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--23 years, 74.2 ft³/s (2.101 m³/s), 53,760 acre-ft/yr (66.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,260 ft³/s (92.3 m³/s) Jan. 20, 1964, gage height, 10.51 ft (3.203 m), from rating curve extended above 1,800 ft³/s (51.0 m³/s); maximum gage height, 11.58 ft (3.530 m) Dec. 26, 1955 (backwater from debris); no flow at times in July 1973 and August 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,100 ft³/s (31.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 24	1430	*1,930	54.7	*5.95	1.814	Feb. 3	0600	1,420	40.2	5.22	1.591

Minimum, 0.29 ft³/s (0.008 m³/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	12	98	153	65	40	33	33	12	12	1.6	4.1
2	6.7	15	98	142	130	37	40	29	12	13	1.2	3.6
3	6.1	17	161	128	983	35	37	25	10	13	1.1	3.4
4	5.8	13	148	123	442	35	53	24	8.9	12	1.1	5.3
5	5.4	14	126	215	268	38	85	23	8.3	10	1.2	11
6	6.4	20	121	228	189	40	94	21	7.8	8.3	1.5	12
7	7.3	19	114	194	196	38	82	19	7.8	7.3	1.3	10
8	6.4	16	110	167	257	35	66	18	7.8	7.3	1.1	11
9	5.8	13	108	148	334	37	56	18	7.8	6.9	.80	15
10	5.4	11	68	134	262	38	49	17	12	6.5	.68	34
11	5.1	10	70	115	205	36	42	19	11	6.1	.68	25
12	5.1	10	72	105	169	38	38	17	8.9	5.0	1.2	15
13	4.7	11	98	107	130	46	35	18	8.9	4.4	2.8	12
14	4.7	12	213	102	110	49	33	18	7.8	3.9	2.8	14
15	4.7	15	424	97	100	45	37	24	8.3	3.9	3.2	11
16	4.7	25	297	189	90	42	37	20	7.3	6.5	4.1	9.4
17	4.7	19	309	223	95	41	30	19	7.3	6.1	4.1	9.4
18	4.7	16	265	210	110	38	27	18	8.3	5.0	3.4	15
19	4.7	16	185	203	100	35	25	17	8.9	3.9	2.8	13
20	5.1	13	136	205	90	33	25	16	7.8	3.4	2.8	11
21	5.1	30	114	210	80	31	29	15	7.3	3.6	4.1	10
22	5.1	376	100	225	70	31	31	15	8.3	3.0	6.9	9.4
23	6.1	332	115	205	65	42	46	15	8.3	3.0	5.7	8.9
24	7.7	922	115	178	60	42	45	20	11	2.3	6.9	7.8
25	9.2	450	107	159	55	37	44	20	10	2.1	15	7.8
26	11	409	102	136	50	35	44	18	8.9	1.6	8.3	7.8
27	9.2	223	110	119	45	34	41	18	7.8	1.6	5.7	6.9
28	7.7	148	107	110	42	33	38	16	6.5	2.6	4.7	6.9
29	7.3	123	110	105	---	33	35	15	21	3.0	4.1	6.5
30	13	103	159	89	---	34	35	14	15	2.1	4.1	6.9
31	15	---	169	63	---	31	---	13	---	2.0	4.7	---
TOTAL	207.6	3413	4529	4787	4792	1161	1312	592	283.0	171.4	109.66	323.1
MEAN	6.70	114	146	154	171	37.5	43.7	19.1	9.43	5.53	3.54	10.8
MAX	15	922	424	228	983	49	94	33	21	13	15	34
MIN	4.7	10	68	63	42	31	25	13	6.5	1.6	.68	3.4
AC-FT	412	6770	8980	9500	9500	2300	2600	1170	561	340	218	641

CAL YR 1977 TOTAL 12183.83 MEAN 33.4 MAX 922 MIN .00 AC-FT 24170
WTR YR 1978 TOTAL 21680.76 MEAN 59.4 MAX 983 MIN .68 AC-FT 43000

14311500 LOOKINGGLASS CREEK AT BROCKWAY, OR

LOCATION.--Lat 43°07'50", long 123°27'50", in SE¼SE¼ sec.13, T.28 S., R.7 W., Douglas County, Hydrologic Unit 17100302, on left bank 1.7 mi (2.7 km) northwest of Brockway and at mile 2.85 (4.59 km).

DRAINAGE AREA.--158 mi^2 (409 km^2).

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 2135: Drainage area (former site).

GAGE.--Water-stage recorder. Altitude of gage is 540 ft (165 m), from topographic map. Prior to Oct. 5, 1967, water-stage recorder at site 2.3 mi (3.7 km) downstream at different datum.

REMARKS.--Records good. No regulation. Many diversions by pumping for irrigation above station.

AVERAGE DISCHARGE.--23 years, 287 ft^3/s (8.128 m^3/s), 207,900 acre-ft/yr (256 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft^3/s (991 m^3/s) Dec. 26, 1955, gage height, 24.93 ft (7.599 m), site and datum then in use, from rating curve extended above 7,200 ft^3/s (204 m^3/s) on basis of slope-area measurement of peak flow; maximum gage height, 25.28 ft (7.705 m) Dec. 23, 1964 (backwater from South Umpqua River, site and datum then in use); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s (85.0 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 24	1530	*7,850	22.2	*13.14	4.005	Jan. 5	1700	3,490	98.8	8.93	2.722
Dec. 14	1900	3,220	91.2	8.60	2.621	Feb. 3	0600	4,470	127	10.03	3.057

Minimum, no flow July 25 to Aug. 28, Sept. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	32	232	617	239	133	79	128	25	7.8	.00	.08
2	16	26	206	518	960	127	111	110	25	8.9	.00	.00
3	13	23	828	518	3460	123	117	96	23	9.7	.00	.00
4	11	22	626	529	1590	119	130	86	20	9.3	.00	.00
5	8.1	22	411	2040	960	147	224	78	19	10	.00	.03
6	7.1	66	302	1940	656	148	267	71	18	8.5	.00	2.8
7	7.4	61	247	1090	783	138	232	65	17	6.8	.00	9.3
8	8.1	43	224	798	1280	161	191	60	15	5.5	.00	8.5
9	7.1	33	198	634	1320	170	159	56	15	5.0	.00	10
10	6.1	27	172	506	965	170	140	54	16	4.7	.00	32
11	5.5	23	195	415	706	165	120	54	17	4.5	.00	42
12	5.3	19	307	362	552	156	105	53	15	3.9	.00	28
13	5.0	18	1050	322	425	147	94	49	14	3.4	.00	18
14	4.5	18	1940	299	334	135	100	48	14	2.8	.00	14
15	4.2	28	2490	293	340	123	122	60	13	2.2	.00	11
16	4.2	49	1460	1450	310	116	138	62	12	1.8	.00	9.3
17	5.0	51	1210	1320	331	108	122	55	11	1.8	.00	8.1
18	4.6	40	870	990	401	101	107	49	11	2.4	.00	8.1
19	4.2	35	601	793	378	93	100	45	12	2.0	.00	10
20	3.8	30	446	683	328	86	101	41	11	1.5	.00	10
21	3.6	33	349	764	280	81	120	37	10	1.1	.00	8.5
22	4.0	754	276	960	249	76	193	36	9.3	.41	.00	7.1
23	5.5	1290	1000	788	224	100	305	35	9.3	.18	.00	6.1
24	8.0	4320	1420	605	206	168	256	36	9.3	.04	.00	5.5
25	10	2170	834	472	187	136	226	43	9.7	.02	.00	5.3
26	13	1600	576	375	174	120	216	41	9.3	.00	.00	5.0
27	11	860	521	302	161	110	187	38	8.1	.00	.00	4.7
28	9.0	529	483	262	143	100	165	34	7.4	.00	2.2	3.7
29	15	375	468	234	---	94	147	32	6.4	.00	1.8	3.4
30	31	283	960	206	---	91	138	29	6.1	.00	.83	3.4
31	35	---	849	191	---	83	---	27	---	.00	.35	---
TOTAL	297.3	12880	21751	21276	17942	3825	4712	1708	407.9	104.25	5.18	273.91
MEAN	9.59	429	702	686	641	123	157	55.1	13.6	3.36	.17	9.13
MAX	35	4320	2490	2040	3460	170	305	128	25	10	2.2	42
MIN	3.6	18	172	191	143	76	79	27	6.1	.00	.00	.00
CFSM	.06	2.72	4.44	4.34	4.06	.78	.99	.35	.09	.02	.001	.06
IN.	.07	3.03	5.12	5.01	4.22	.90	1.11	.40	.10	.02	.00	.06
AC-FT	590	25550	43140	42200	35590	7590	9350	3390	809	207	10	543

CAL YR 1977 TOTAL 44511.27 MEAN 122 MAX 4320 MIN .00 CFSM .77 IN 10.48 AC-FT 88290
WTR YR 1978 TOTAL 85182.54 MEAN 233 MAX 4320 MIN .00 CFSM 1.48 IN 20.06 AC-FT 169000

14312000 SOUTH UMPQUA RIVER NEAR BROCKWAY, OR

LOCATION.--Lat 43°08'00", long 123°23'50", in SW¼ sec.15, T.28 S., R.6 W., Douglas County, Hydrologic Unit 17100302, on right bank 10 ft (3 m) downstream from Winston Bridge on State Highway 99, 2.5 mi (4.0 km) northeast of Brockway, 4.2 mi (6.8 km) downstream from Lookingglass Creek, and at mile 132.3 (213.7 km).

DRAINAGE AREA.--1,670 mi^2 (4,325 km^2).

PERIOD OF RECORD.--December 1905 to June 1912, October 1923 to September 1926, January 1942 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1248: 1946(M), 1948(M), 1951. WSP 1448: Drainage area. WRD Oreg. 1972: 1965(M).

GAGE.--Water-stage recorder. Datum of gage is 462.52 ft (140.976 m) National Geodetic Vertical Datum of 1929 (State Highway Department bench mark). Prior to June 24, 1949, nonrecording gage at several sites within 400 ft (122 m) of present site at various datums. June 24, 1949, to Oct. 1, 1970, at datum 461.84 ft (140.769 m) National Geodetic Vertical Datum of 1929 (State Highway Department bench mark).

REMARKS.--Records good. No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--44 years (water years 1907-11, 1924-26, 1943-78), 2,899 ft^3/s (82.10 m^3/s), 23.57 in/yr (599 mm/yr), 2,100,000 acre-ft/yr (2.59 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 125,000 ft^3/s (3,540 m^3/s) Dec. 23, 1964, gage height, 34.28 ft (10.449 m); minimum, 16 ft^3/s (0.45 m^3/s) Aug. 23, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 21, 1927, reached a stage of about 31.2 ft (9.51 m), present site and datum, discharge (revised), 89,500 ft^3/s (2,530 m^3/s). Discharge for flood of February 1890, which reached a stage 1.9 ft (0.60 m) higher, according to local resident who lived nearby at time of both floods, has been found to be in error and should not be used.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft^3/s (566 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 24	2130	*42,100	1,190	*19.90	6.066
Dec. 15	1900	24,100	683	14.79	4.508
Jan. 5	2200	20,100	569	13.80	4.206
Jan. 16	1900	23,200	657	14.58	4.444
Feb. 3	1430	35,600	1,010	18.06	5.505

Minimum, 56 ft^3/s (1.59 m^3/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	670	697	4240	5580	2380	1940	1370	2010	748	488	92	159
2	458	819	3910	4630	3960	1820	1470	1830	702	453	86	153
3	364	697	8650	4360	28400	1730	1550	1650	664	519	86	141
4	301	783	8370	5230	18000	1660	1680	1520	622	562	82	145
5	262	1300	5690	11600	10500	1730	2230	1430	591	538	81	172
6	242	1110	4250	14600	7900	1880	3500	1320	562	445	79	262
7	233	856	4070	8760	8900	1790	3300	1230	538	390	78	360
8	249	697	3970	6520	17000	1840	2730	1140	519	356	76	397
9	242	586	3380	5770	16000	2310	2330	1080	501	327	69	401
10	218	519	2910	5600	11100	2480	2110	1050	501	308	65	940
11	198	475	2610	5000	8120	2310	1980	1050	543	286	58	1700
12	188	543	3720	4490	6310	2240	1780	1080	562	272	57	1340
13	179	458	5710	4060	5150	2180	1630	1010	510	246	57	862
14	172	462	13500	3920	4190	2170	1550	987	466	233	65	675
15	165	538	20100	3940	3970	2030	1560	1070	449	218	68	611
16	161	1500	15800	14000	3730	1890	1640	1540	433	209	89	524
17	155	1370	15000	15800	3580	1750	1600	1480	413	227	98	466
18	151	1000	12100	10600	3810	1620	1550	1290	397	227	109	470
19	149	825	8050	8500	4060	1530	1490	1150	405	209	121	576
20	147	719	5960	7440	3970	1440	1570	1060	429	185	107	567
21	143	719	4740	6850	3730	1370	1650	994	405	176	107	488
22	147	5770	3810	7750	3400	1360	1750	946	382	168	126	433
23	155	12600	5290	7080	3090	1450	2460	901	367	153	163	397
24	172	25200	10500	5770	2860	2180	2630	881	364	141	221	364
25	290	26900	7260	4810	2630	2110	2360	994	375	128	233	339
26	611	24600	5000	4190	2440	1850	2420	1090	390	119	538	320
27	445	13100	4400	3690	2260	1670	2760	1010	371	114	409	297
28	364	9080	4680	3230	2080	1560	2560	960	331	115	290	276
29	339	6220	4500	2940	---	1440	2290	894	356	110	227	259
30	686	5250	6330	2650	---	1450	2070	844	611	105	188	252
31	795	---	7030	2440	---	1440	---	801	---	102	170	---
TOTAL	9051	145393	215530	201820	193520	56220	61570	36292	14507	8129	4295	14346
MEAN	292	4846	6953	6510	6911	1814	2052	1171	484	262	139	478
MAX	795	26900	20100	15800	28400	2480	3500	2010	748	562	538	1700
MIN	143	458	2610	2440	2080	1360	1370	801	331	102	57	141
CFSM	.18	2.90	4.16	3.90	4.14	1.09	1.23	.70	.29	.16	.08	.29
IN.	.20	3.24	4.80	4.50	4.31	1.25	1.37	.81	.32	.18	.10	.32
AC-FT	17950	288400	427500	400300	383800	111500	122100	71990	28770	16120	8520	28460

CAL YR 1977 TOTAL 558731 MEAN 1531 MAX 26900 MIN 17 CFSM .92 IN 12.45 AC-FT 1108000
WTR YR 1978 TOTAL 960673 MEAN 2632 MAX 28400 MIN 57 CFSM 1.58 IN 21.40 AC-FT 1905000

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR

LOCATION.—Lat 43°13'20", long 123°24'43", in NW¼SE¼ sec.16, T.27 S., R.6 W., Douglas County, Hydrologic Unit 17100302, on left bank, 3.7 mi (6.0 km) west of Roseburg, and at mile 117.7 (189.4 km).

DRAINAGE AREA.—1,798 mi^2 (4,657 km^2).

PERIOD OF RECORD.—Water years 1970 to current year.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: October 1970 to current year.
pH: August 1971 to current year.
DISSOLVED OXYGEN: October 1970 to current year.
WATER TEMPERATURES: October 1970 to current year.
TURBIDITY: March 1974 to current year.

INSTRUMENTATION.—Water-quality monitor since October 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum, 423 micromhos Sept. 18, 1971; minimum, 41 micromhos Mar. 2, 3, 1972.
pH: Maximum, 10.0 units Sept. 8, 9, 1971; minimum, 5.0 units Sept. 29, 1971.
DISSOLVED OXYGEN: Maximum, 16.0 mg/l July 30, 1977; minimum, 0.4 mg/l Aug. 10, 1978.
WATER TEMPERATURES: Maximum, 35.0°C July 16, 1976; minimum, 0.0°C Dec. 14, 16, 1972, Jan. 9, 1974.
TURBIDITY: Maximum recorded, 800 JTU Dec. 27, 1974; minimum recorded, 0 JTU on many days 1974, 1976-78.

EXTREMES FOR CURRENT YEAR.—
SPECIFIC CONDUCTANCE: Maximum, 216 micromhos Aug. 15; minimum, 67 micromhos Feb. 3.
pH: Maximum, 9.2 units several days in August; minimum, 6.4 units Nov. 23, 29.
DISSOLVED OXYGEN: Maximum, 14.5 mg/l Oct. 12; minimum recorded, 0.4 mg/l Aug. 10.
WATER TEMPERATURES: Maximum recorded, 30.0°C July 24, 25; minimum, 4.0°C Nov. 21, 22.
TURBIDITY: Maximum recorded, 100 JTU Nov. 24; minimum recorded, 0 JTU on many days during the year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT 27...	1530	545	13.5	7.3	10.2	184	73	72	--	16
NOV 29...	1600	5600	9.0	6.5	10.9	93	K2300	2000	--	7.3
DEC 21...	1300	4500	5.5	7.6	11.7	100	1400	1400	--	9.5
JAN 25...	1400	4820	6.0	7.6	13.4	100	320	78	16	8.1
FEB 23...	0900	3190	10.0	7.8	11.0	103	37	120	--	8.4
MAR 23...	0845	1410	14.0	7.8	9.8	130	34	28	--	11
APR 20...	1030	1550	12.5	8.0	11.5	120	K15	K7	--	10
MAY 02...	1100	1900	14.0	8.0	10.9	113	24	K12	--	--
JUN 14...	0930	529	21.0	7.9	9.2	128	46	300	--	13
JUL 26...	1300	135	20.0	8.1	9.2	183	26	350	--	14
AUG 14...	1300	75	24.5	8.9	11.3	205	--	1600	14	15
SEP 18...	1330	445	18.0	7.7	9.3	142	420	51	--	12

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT 27...	7.4	--	--	62	--	--	--	--	--	.09
NOV 29...	3.3	--	--	32	--	--	--	.00	.09	.19
DEC 21...	3.9	--	--	34	--	--	--	.00	.20	.21
JAN 25...	4.0	4.1	.6	37	5.6	3.2	.1	.00	.17	.13
FEB 23...	4.1	--	--	31	--	--	--	.01	.12	.13
MAR 23...	4.9	--	--	46	--	--	--	.01	.04	.03
APR 20...	5.7	--	--	46	--	--	--	.00	.01	.04
MAY 02...	4.2	--	--	42	--	--	--	.01	.00	.02
JUN 14...	5.3	--	--	47	--	--	--	.01	.06	.05
JUL 26...	6.4	--	--	51	--	--	--	.06	.09	.13
AUG 14...	6.8	12	1.6	59	8.5	15	.1	.20	.28	.43
SEP 18...	4.8	--	--	48	--	--	--	.01	.06	.05

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER .977 TO SEPTEMBER 1978

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)
OCT 27...	.24	.16	.49	.15	70	8	105	--	155
NOV 29...	.35	.04	.58	.98	32	0	69	--	1040
DEC 21...	.04	.03	.28	.06	48	5	71	--	863
JAN 25...	.11	.00	.24	.05	37	0	--	65	846
FEB 23...	.09	.02	.24	.04	38	7	58	--	500
MAR 23...	.20	.03	.26	.09	48	2	71	--	270
APR 20...	.31	.08	.43	.05	48	3	64	--	268
MAY 02...	.58	.04	.64	.09	--	--	57	--	292
JUN 14...	.73	.11	.89	.04	54	8	72	--	103
JUL 26...	.83	.03	.99	.26	61	10	97	--	35.4
AUG 14...	.44	.56	1.4	.48	65	6	--	111	22.5
SEP 18...	.30	.15	.50	.11	50	2	81	--	97.3

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, HEXA-VALENT, DIS. (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
JAN 25...	0	0	0	0	0	3	50
AUG 14...	2	20	1	0	<1	3	20

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	NICKEL, DIS-SOLVED (UG/L AS NI)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	MERCURY DIS-SOLVED (UG/L AS HG)
JAN 25...	2	3	0	10	20	.0
AUG 14...	5	3	0	7	0	.1

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)
OCT 27...	.00	.00	.0	.00	.00	.00	.00	.00
JAN 25...	.00	.00	.0	.00	.00	.00	.00	.00
APR 20...	.00	.00	.0	.00	.00	.00	.00	.00
AUG 14...	.00	.00	.0	.00	.00	.00	.00	.00

DATE	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	PCB, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT 27...	0	.00	.00	.0	.00	.03	.00
JAN 25...	0	.00	.00	.0	.00	.00	.00
APR 20...	0	.00	.00	.0	.00	.01	.00
AUG 14...	0	.00	.00	.0	.04	.00	.00

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	100	118	118	127	112	115	152	192	166
2			---	98	118	119	130	113	117	151	193	167
3			---	103	81	121	128	115	118	146	195	165
4			---	100	75	123	128	116	120	145	198	163
5			---	95	86	126	126	118	122	146	199	163
6			---	80	91	127	120	118	123	146	199	167
7			---	88	94	125	110	120	124	147	199	170
8			---	95	79	126	110	121	125	148	202	171
9			---	99	81	124	112	123	126	148	203	175
10			---	99	85	115	116	124	126	149	204	180
11			---	101	90	112	118	126	127	149	205	169
12			---	102	95	114	119	126	127	151	209	142
13			---	104	98	116	119	126	128	154	209	133
14			---	106	101	116	123	126	129	157	209	132
15			---	106	106	117	127	127	130	161	212	133
16			78	98	106	118	128	123	132	163	211	136
17			84	79	107	120	127	116	134	165	211	140
18			86	87	107	122	124	108	135	168	206	143
19			90	92	104	125	121	107	137	170	204	147
20			96	94	101	126	120	109	140	171	203	148
21			100	97	101	128	121	111	141	174	203	151
22			103	---	102	128	118	113	143	176	203	152
23			106	---	104	130	118	114	145	178	202	153
24			---	---	106	132	108	117	145	180	199	155
25			---	---	109	121	104	118	146	184	195	156
26			---	---	112	118	109	116	148	186	200	157
27			---	---	115	120	108	114	150	188	188	158
28			---	107	116	122	105	112	153	191	182	160
29			105	110	---	124	106	111	156	191	178	162
30			106	112	---	126	108	111	155	190	174	164
31			96	115	---	128	---	113	---	190	166	---
MEAN			95	99	100	122	118	117	134	165	198	156

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	7.5	7.0	---	---	7.6	7.6	7.8	7.7	7.8	7.7
2	---	---	7.3	7.0	---	---	7.7	7.6	7.8	7.7	7.8	7.7
3	7.7	---	7.2	7.0	---	---	7.7	7.6	7.6	7.4	7.9	7.7
4	7.6	7.4	7.0	6.9	---	---	7.7	7.6	7.6	7.5	7.8	7.8
5	7.6	7.3	7.0	7.0	---	---	7.6	7.5	7.6	7.6	8.0	7.8
6	7.6	7.3	7.1	7.0	---	---	7.5	7.4	7.6	7.6	8.0	7.8
7	7.5	7.2	7.1	7.1	---	---	7.5	7.5	7.7	7.6	8.0	7.8
8	7.5	7.2	7.1	6.9	---	---	7.6	7.5	7.6	7.6	8.0	7.8
9	7.5	7.2	7.0	6.8	---	---	7.6	7.6	7.6	7.6	8.0	7.8
10	7.4	7.1	7.0	6.8	---	---	7.6	7.6	7.6	7.6	8.0	7.8
11	7.4	7.1	7.0	6.9	---	---	7.6	7.6	7.6	7.6	8.0	7.7
12	7.5	7.0	6.9	6.7	---	---	7.6	7.6	7.6	7.6	8.0	7.8
13	7.4	7.0	6.9	6.8	---	---	7.7	7.6	7.7	7.6	8.0	7.8
14	7.1	7.0	7.0	6.9	---	---	7.7	7.6	7.7	7.6	8.0	7.8
15	7.2	6.8	7.0	6.8	---	---	7.7	7.7	7.7	7.7	8.0	7.8
16	7.0	6.8	6.8	6.7	7.6	7.5	7.7	7.5	7.7	7.7	8.0	7.7
17	6.9	6.7	6.9	6.7	7.6	7.5	7.6	7.5	7.7	7.7	8.1	7.8
18	7.0	6.7	---	---	7.6	7.5	7.6	7.6	7.7	7.7	8.2	7.8
19	6.9	6.7	---	---	7.5	7.5	7.6	7.6	7.7	7.7	8.2	7.8
20	6.8	6.6	---	---	7.7	7.5	7.6	7.6	7.8	7.7	8.2	7.8
21	7.1	6.6	---	---	7.6	7.6	7.6	7.6	7.8	7.7	8.3	7.8
22	7.0	6.6	---	---	7.6	7.6	7.7	---	7.8	7.7	8.2	7.8
23	7.0	6.6	---	---	7.6	7.5	---	---	7.8	7.7	7.9	7.7
24	7.1	6.7	---	---	---	---	---	---	7.8	7.7	7.9	7.7
25	7.1	6.7	6.7	---	---	---	---	---	7.8	7.7	8.0	7.7
26	7.1	6.6	6.7	---	---	---	---	---	7.8	7.7	8.0	7.7
27	7.2	6.8	7.4	---	---	---	7.7	---	7.8	7.7	8.2	7.7
28	7.3	7.0	6.8	---	---	---	7.7	7.7	7.8	7.7	8.0	7.7
29	7.3	6.9	6.5	---	7.7	7.6	7.7	7.7	---	---	8.1	7.7
30	7.2	6.8	---	---	7.7	7.6	7.8	7.7	---	---	8.2	7.7
31	7.2	6.7	---	---	7.6	7.6	7.8	7.7	---	---	8.1	7.8
MONTH	7.7	6.6	7.5	6.7	7.7	7.5	7.8	7.4	7.8	7.4	8.3	7.7

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR—Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.1	7.8	8.1	7.6	8.2	7.6	8.1	7.4	9.0	7.4	8.5	7.1
2	8.2	7.8	8.2	7.7	8.2	7.6	8.3	7.4	9.0	7.3	8.4	7.1
3	8.2	7.8	8.3	7.7	8.3	7.6	8.3	7.5	8.9	7.3	8.0	7.1
4	8.2	7.8	8.2	7.7	8.4	7.6	8.5	7.5	8.9	7.2	7.8	7.0
5	7.9	7.8	8.2	7.7	8.4	7.5	8.7	7.5	9.0	7.5	7.4	7.0
6	7.8	7.7	8.3	7.7	8.4	7.5	8.7	7.5	9.1	7.5	7.7	7.1
7	7.9	7.7	8.3	7.7	8.5	7.5	8.7	7.4	9.2	7.5	8.4	7.2
8	8.0	7.7	8.3	7.6	8.5	7.5	8.7	7.4	9.1	7.3	8.2	7.3
9	8.2	7.7	8.2	7.6	8.5	7.4	8.6	7.4	9.2	7.4	8.0	7.3
10	8.2	7.7	8.1	7.6	8.5	7.4	8.8	7.5	9.2	7.4	7.8	7.3
11	8.4	7.7	8.1	7.6	8.5	7.5	9.0	7.4	9.2	7.3	7.6	7.5
12	8.3	7.8	8.0	7.6	8.4	7.6	9.0	7.5	8.8	7.2	7.6	7.4
13	8.1	7.7	8.0	7.5	8.5	7.4	8.8	7.4	8.7	7.1	7.6	7.3
14	8.0	7.7	8.0	7.6	8.5	7.5	8.7	7.3	9.2	7.1	7.6	7.3
15	8.0	7.7	8.1	7.6	8.6	7.5	8.0	7.2	8.8	7.2	7.8	7.3
16	8.2	7.8	8.1	7.6	8.7	7.4	8.2	7.1	8.9	7.1	8.1	7.3
17	8.1	7.8	8.1	7.6	8.6	7.4	8.5	7.2	9.2	7.2	8.2	7.4
18	8.3	7.8	8.1	7.5	8.5	7.4	8.6	7.2	9.2	7.2	8.2	7.3
19	8.3	7.8	8.1	7.5	8.5	7.3	8.8	7.4	9.1	7.3	8.3	7.4
20	8.3	7.8	8.1	7.5	8.6	7.3	8.8	7.3	8.8	7.3	8.4	7.5
21	8.3	7.7	8.0	7.5	8.5	7.4	8.8	7.3	8.5	7.1	8.4	7.5
22	8.1	7.7	8.1	7.5	8.4	7.3	8.8	7.3	8.7	7.0	8.5	7.4
23	8.0	7.7	7.9	7.6	8.2	7.3	8.8	7.3	8.3	7.0	8.6	7.4
24	7.9	7.7	7.9	7.6	8.3	7.3	8.7	7.3	7.6	7.1	8.6	7.4
25	7.8	7.6	8.1	7.6	8.5	7.3	8.7	7.3	8.1	7.2	8.4	7.3
26	7.8	7.6	8.1	7.6	8.5	7.3	8.7	7.3	8.4	7.2	8.4	7.3
27	8.0	7.6	8.1	7.6	8.7	7.3	8.6	7.2	8.0	7.3	8.4	7.3
28	8.0	7.6	8.1	7.6	8.7	7.3	8.6	7.2	8.4	7.3	8.4	7.3
29	8.1	7.6	8.2	7.7	8.5	7.3	8.9	7.3	8.3	7.2	8.3	7.3
30	8.0	7.6	8.2	7.7	8.1	7.3	9.0	7.4	7.8	7.2	8.3	7.3
31	---	---	8.3	7.7	---	---	9.0	7.5	8.4	7.1	---	---
MONTH	8.4	7.6	8.3	7.5	8.7	7.3	9.0	7.1	9.2	7.0	8.6	7.0

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	10.2	9.1	9.8	---	---	---	11.6	11.3	11.5
2	---	---	---	10.5	9.5	9.7	---	---	---	11.6	11.4	11.6
3	13.0	---	---	11.2	9.9	10.4	---	---	---	11.5	11.0	11.3
4	13.1	11.9	12.4	10.9	9.4	10.3	---	---	---	11.0	10.7	10.9
5	13.4	12.0	12.5	11.8	---	---	---	---	---	10.7	10.7	10.7
6	13.1	11.8	12.4	---	---	---	---	---	---	10.9	10.7	10.8
7	13.6	11.8	12.6	---	---	---	---	---	---	11.1	10.9	11.0
8	13.8	12.2	12.9	---	---	---	---	---	---	11.1	10.8	11.0
9	13.9	12.2	13.0	---	---	---	---	---	---	10.8	10.6	10.7
10	---	---	---	---	---	---	---	---	---	10.6	10.6	10.6
11	13.9	12.1	13.1	---	---	---	---	---	---	11.0	10.6	10.8
12	14.5	11.9	13.0	---	---	---	---	---	---	11.3	11.1	11.2
13	14.2	12.1	13.0	---	---	---	---	---	---	11.3	10.9	11.2
14	13.6	11.6	12.5	---	---	---	---	---	---	10.9	10.6	10.7
15	13.4	11.5	12.3	---	---	---	---	---	---	10.7	10.6	10.7
16	12.4	11.1	11.8	---	---	---	11.5	11.2	11.3	10.9	10.7	10.8
17	12.2	9.6	10.9	11.5	10.4	10.9	11.3	11.1	11.2	11.0	10.9	11.0
18	11.9	9.4	10.4	11.4	10.7	11.1	11.4	11.3	11.3	11.1	11.0	11.0
19	10.9	8.7	10.0	11.9	11.1	11.5	11.5	11.4	11.5	11.1	11.0	11.1
20	9.2	8.1	8.7	12.4	11.6	12.0	11.8	11.5	11.7	11.2	11.0	11.1
21	9.9	8.2	9.0	12.9	12.0	12.4	12.4	11.7	12.0	11.0	11.0	11.0
22	10.1	7.5	8.8	12.5	11.8	12.3	12.1	11.8	11.9	---	---	---
23	9.6	7.5	8.5	11.9	11.4	11.7	11.8	11.7	11.8	---	---	---
24	9.3	7.4	8.2	11.8	10.5	11.5	11.8	10.7	11.2	---	---	---
25	8.5	6.6	7.5	---	---	---	11.9	11.2	11.4	---	---	---
26	9.0	6.9	7.8	---	---	---	---	---	---	---	---	---
27	10.6	7.4	8.7	---	---	---	---	---	---	11.9	---	---
28	10.3	8.7	9.3	11.5	10.5	11.0	---	---	---	12.0	11.9	11.9
29	10.0	8.4	9.1	---	---	---	11.0	10.7	10.8	12.0	11.8	11.9
30	10.6	8.7	9.5	---	---	---	11.0	10.7	10.9	11.8	11.5	11.7
31	10.5	8.5	9.5	---	---	---	11.3	11.1	11.2	11.8	11.6	11.6
MONTH	14.5	6.6	10.5	12.9	9.1	11.1	12.4	10.7	11.4	12.0	10.6	11.1

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.8	11.7	11.7	11.6	11.2	11.4	11.2	10.0	10.6	11.0	9.8	10.4
2	12.0	11.8	11.9	11.7	11.4	11.5	11.6	10.5	11.0	11.4	9.9	10.6
3	12.0	11.6	11.9	11.7	11.4	11.5	11.6	10.5	11.1	11.1	9.8	10.4
4	11.7	11.4	11.4	11.4	10.9	11.1	12.0	10.8	11.4	11.0	9.7	10.3
5	11.7	11.4	11.5	11.0	10.7	10.8	11.3	10.9	11.0	11.3	9.9	10.6
6	11.5	11.5	11.5	10.9	10.6	10.7	11.5	10.9	11.3	11.4	9.9	10.6
7	11.6	11.4	11.5	10.7	10.3	10.5	11.9	11.4	11.7	11.2	9.4	10.3
8	11.9	11.6	11.8	10.7	10.3	10.5	12.2	11.4	11.8	10.9	8.8	9.9
9	12.0	11.3	11.7	11.4	10.5	10.9	12.3	11.0	11.7	10.4	8.5	9.3
10	12.2	11.8	12.0	11.6	11.0	11.3	11.8	10.5	11.2	10.3	8.5	9.3
11	12.3	12.0	12.2	11.7	11.2	11.4	11.7	10.3	11.0	10.4	8.7	9.5
12	12.2	12.0	12.1	11.9	11.2	11.5	11.7	10.3	11.0	10.5	8.9	9.6
13	12.0	11.8	11.9	11.9	11.2	11.5	11.4	10.3	10.9	10.4	8.8	9.4
14	11.9	11.7	11.8	12.1	11.3	11.7	11.5	10.5	11.0	10.1	8.6	9.3
15	12.1	11.7	11.9	12.2	11.5	11.8	11.6	10.7	11.1	10.3	8.8	9.6
16	12.1	12.0	12.1	12.1	11.3	11.7	12.3	11.0	11.6	10.6	9.3	9.9
17	12.1	12.0	12.1	11.8	11.0	11.3	12.3	11.3	11.8	10.4	9.2	9.8
18	12.1	11.8	12.0	11.4	10.6	11.0	12.5	11.0	11.8	10.6	9.1	9.8
19	11.7	11.3	11.5	11.1	10.2	10.6	11.9	10.8	11.3	10.2	8.6	9.4
20	11.2	11.1	11.2	11.0	10.0	10.4	12.0	10.9	11.3	10.0	8.2	9.1
21	11.2	11.1	11.2	10.8	9.7	10.2	12.1	10.8	11.3	9.6	7.9	8.7
22	11.2	11.0	11.1	10.7	9.6	10.0	11.8	10.7	11.2	10.2	8.5	9.3
23	11.0	10.8	10.9	10.4	9.5	10.0	11.7	10.7	11.1	10.2	8.6	9.4
24	10.9	10.6	10.7	10.9	10.1	10.5	11.4	10.6	10.9	10.6	9.0	9.8
25	10.9	10.6	10.8	11.7	10.7	11.2	11.3	10.4	10.8	10.8	9.3	10.0
26	11.1	10.7	10.9	11.4	10.6	10.9	10.9	10.3	10.5	10.6	8.7	9.8
27	11.4	11.0	11.2	11.4	10.3	10.8	11.1	10.3	10.7	10.7	9.3	9.9
28	11.4	11.1	11.2	10.8	10.0	10.4	11.0	10.2	10.5	10.7	9.0	9.8
29	---	---	---	10.8	9.8	10.3	11.1	10.1	10.5	10.5	8.9	9.7
30	---	---	---	11.0	9.8	10.3	10.8	9.8	10.3	10.5	8.6	9.5
31	---	---	---	11.0	9.9	10.3	---	---	---	10.2	8.2	9.2
MONTH	12.3	10.6	11.6	12.2	9.5	10.9	12.5	9.8	11.1	11.4	7.9	9.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	10.3	7.8	9.0	9.6	7.0	8.1	12.6	3.2	7.8	10.3	4.4	7.2
2	9.9	7.5	8.7	10.4	7.2	8.5	12.6	2.9	7.6	9.3	4.2	6.8
3	9.7	7.1	8.3	10.1	7.2	8.6	12.3	2.4	7.2	8.2	3.8	5.9
4	9.4	6.9	8.1	10.8	7.7	9.1	11.2	2.0	6.7	7.7	3.8	5.6
5	9.2	6.6	7.8	10.9	7.8	9.1	12.3	2.5	7.2	6.7	4.0	5.4
6	9.1	6.4	7.6	10.7	7.0	8.6	12.5	2.4	7.4	8.6	4.5	6.4
7	9.1	6.4	7.6	11.1	6.6	8.6	12.6	2.2	7.5	9.5	6.3	7.7
8	9.4	6.6	7.7	11.2	6.5	8.6	11.6	.9	6.1	9.0	6.4	7.7
9	9.6	6.6	7.9	10.4	6.5	8.3	12.3	.5	5.9	8.9	6.7	7.5
10	9.8	6.9	8.2	11.4	6.6	9.0	12.2	.4	5.5	8.9	6.8	7.7
11	10.2	7.3	8.7	12.2	6.4	9.1	---	---	---	8.8	7.3	8.0
12	9.5	7.2	8.3	12.1	6.0	8.8	---	---	---	8.5	7.8	8.1
13	9.9	7.0	8.5	11.9	5.4	8.4	---	---	---	8.6	7.8	5.2
14	10.9	7.3	8.7	11.0	4.3	7.5	---	---	---	9.2	7.2	7.9
15	11.4	8.0	9.6	8.5	3.6	6.2	10.1	1.7	5.2	9.2	7.9	8.4
16	11.4	7.8	9.3	9.6	3.6	6.5	11.7	1.9	6.4	9.6	7.9	8.7
17	11.2	7.6	9.3	10.6	4.4	7.3	13.2	2.5	7.4	9.7	7.9	8.8
18	10.4	7.0	8.4	10.9	4.7	7.7	12.8	2.3	7.4	9.4	7.8	8.5
19	11.0	7.0	8.7	11.2	4.8	7.9	11.2	2.4	6.4	9.8	7.8	8.6
20	11.0	6.8	8.6	10.8	4.2	7.4	9.4	2.2	5.5	9.6	7.8	8.5
21	10.5	6.9	8.4	11.0	3.8	7.2	8.6	2.5	5.0	9.2	7.3	8.0
22	10.6	6.9	8.4	10.6	3.2	6.8	9.6	2.1	5.4	10.0	7.6	8.3
23	10.4	6.8	8.4	10.9	2.9	6.7	8.2	2.4	5.4	9.6	7.5	7.9
24	10.8	7.1	8.9	10.4	3.0	6.7	6.1	3.4	4.6	9.3	7.2	7.7
25	11.5	7.5	9.4	10.1	2.6	6.4	7.2	3.9	5.4	9.3	6.5	7.6
26	11.3	7.6	9.3	11.0	2.4	6.3	8.7	4.4	5.8	8.5	5.9	7.1
27	11.6	7.2	9.2	10.3	3.0	6.3	6.8	4.7	5.7	9.4	6.0	7.5
28	11.0	6.5	8.7	10.7	3.2	6.7	7.2	4.5	5.7	9.3	6.0	7.4
29	10.1	6.0	7.9	12.1	3.5	7.7	8.0	4.5	5.5	9.1	6.1	7.3
30	9.3	6.4	7.7	12.6	3.7	8.0	7.5	4.0	5.5	9.4	5.7	7.5
31	---	---	---	12.4	3.6	7.9	9.7	4.1	6.6	---	---	---
MONTH	11.6	6.0	8.5	12.6	2.4	7.7	13.2	.4	6.2	10.3	3.8	7.5

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR—Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	13.5	12.5	11.5	11.0	7.0	6.5	8.5	8.0	8.5	8.0
2	---	---	13.0	11.0	11.5	10.0	6.5	6.0	8.0	7.5	8.0	7.5
3	15.5	---	11.5	10.0	11.5	10.5	7.5	6.0	9.0	8.0	9.0	7.5
4	16.5	13.5	10.0	9.0	11.0	10.5	7.5	7.5	9.5	9.0	9.0	8.0
5	17.5	14.0	9.5	9.0	12.0	10.0	8.5	7.5	9.5	9.0	10.5	9.0
6	16.5	14.5	10.0	8.5	10.0	9.5	8.5	8.5	9.5	9.0	11.5	10.0
7	16.5	14.5	10.5	9.0	11.0	9.0	8.5	8.0	9.0	9.0	11.5	10.5
8	16.0	14.5	---	---	11.5	9.0	8.5	8.0	8.5	8.0	11.5	10.5
9	16.5	14.0	---	---	9.0	8.0	9.0	8.5	8.0	8.0	11.5	10.5
10	16.5	13.5	---	---	---	7.5	9.5	9.0	8.0	7.0	10.5	10.0
11	17.0	14.0	---	---	---	---	9.0	8.0	7.0	6.5	10.0	9.5
12	17.0	14.5	---	---	---	---	8.0	8.0	6.5	6.5	10.5	9.0
13	17.0	15.0	---	---	---	---	8.5	8.0	7.5	6.5	10.5	9.5
14	18.0	15.5	---	---	---	---	9.0	8.5	7.5	7.0	10.5	9.5
15	17.5	16.0	---	---	---	---	9.5	8.5	8.0	7.0	10.5	9.0
16	17.0	15.5	---	---	8.5	7.5	9.0	8.5	7.5	7.0	10.5	9.5
17	17.5	14.5	---	---	7.5	7.5	9.0	9.0	7.5	7.0	12.0	10.0
18	16.0	15.0	---	---	7.5	7.0	9.0	8.5	8.5	7.5	13.5	11.0
19	17.5	15.0	---	---	7.0	6.5	8.5	8.5	10.0	8.5	14.0	12.0
20	15.5	14.5	---	---	6.5	5.0	9.0	8.5	10.5	9.5	14.5	12.5
21	16.5	13.5	---	---	6.0	5.0	9.0	9.0	10.0	9.5	15.5	13.5
22	16.0	13.5	---	---	7.0	6.0	---	---	10.0	9.5	15.0	13.5
23	16.0	14.5	---	---	8.0	7.0	---	---	11.0	10.0	14.5	14.0
24	17.0	15.0	8.0	7.0	---	---	---	---	11.0	10.0	13.0	11.5
25	16.0	15.5	10.0	8.5	---	---	---	---	11.0	10.0	12.5	11.0
26	15.5	14.5	10.0	9.0	---	---	---	---	10.5	9.5	12.5	11.5
27	15.0	13.5	9.5	9.0	---	---	8.5	---	10.0	9.5	14.0	12.0
28	14.5	13.5	9.5	9.0	---	---	8.0	7.5	9.5	9.0	14.0	13.0
29	13.5	12.0	11.0	9.0	8.5	7.5	8.5	8.0	---	---	14.0	13.5
30	13.0	11.5	12.0	10.5	8.0	8.0	9.0	8.0	---	---	15.0	13.5
31	13.0	11.5	---	---	7.5	7.0	9.0	8.5	---	---	14.0	13.5
MONTH	18.0	11.5	13.5	7.0	12.0	5.0	9.5	6.0	11.0	6.5	15.5	7.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.5	12.5	14.5	13.5	21.5	20.0	21.5	20.0	27.5	24.5	25.0	22.0
2	13.0	11.5	15.5	13.5	23.5	21.0	21.5	19.5	28.0	24.5	25.0	22.5
3	12.5	11.5	15.5	14.0	24.5	22.5	20.5	19.5	28.0	25.5	25.0	22.5
4	12.0	11.0	15.5	14.0	25.5	23.5	21.5	19.5	27.0	25.0	23.0	21.5
5	12.0	11.0	15.0	13.5	27.5	24.5	22.5	19.5	27.0	24.5	22.0	20.0
6	11.0	10.0	16.0	13.0	27.5	25.0	24.5	20.5	27.5	24.5	20.0	19.0
7	11.0	9.0	17.0	14.0	26.5	24.0	25.0	21.5	29.0	25.5	21.0	18.5
8	11.5	9.5	19.0	15.0	27.0	24.0	24.5	22.0	29.5	26.5	20.0	18.5
9	12.5	10.5	19.0	17.0	25.0	22.5	23.5	21.5	29.5	26.5	20.0	18.5
10	14.0	12.0	18.0	16.5	22.5	21.5	23.5	20.5	29.0	26.5	19.0	17.5
11	14.5	13.5	17.5	16.0	23.5	20.5	24.5	20.5	28.5	26.0	19.0	18.0
12	14.5	13.0	17.0	16.0	23.5	21.5	25.5	21.0	27.0	25.0	18.5	17.0
13	13.5	13.0	17.0	16.0	22.5	21.0	26.5	22.5	25.0	23.5	19.0	17.5
14	12.5	12.0	17.0	16.0	21.5	20.0	28.5	24.0	26.0	22.5	18.5	17.0
15	12.0	11.0	16.5	15.5	22.5	19.0	26.5	25.0	25.0	23.0	19.0	17.5
16	11.5	10.5	17.0	15.5	23.5	20.0	25.5	24.0	23.0	22.0	19.0	17.0
17	11.5	10.5	17.0	15.5	24.5	20.0	25.0	22.5	23.5	20.5	19.0	16.5
18	13.0	10.5	18.5	15.5	23.5	21.5	25.5	22.5	24.0	21.0	18.0	15.5
19	13.0	12.0	20.0	17.0	24.5	21.0	26.5	22.5	23.5	22.0	18.0	16.0
20	13.0	11.5	22.0	19.0	24.5	21.5	27.0	23.5	23.5	22.0	18.5	16.5
21	13.0	11.5	22.0	19.0	24.0	22.0	28.5	24.0	22.0	21.5	19.0	17.0
22	12.5	11.5	19.0	18.0	23.5	21.0	29.0	25.0	22.5	21.0	19.0	16.5
23	12.5	11.5	18.0	16.5	21.5	20.5	29.5	26.5	21.5	20.5	20.0	17.0
24	12.5	11.5	16.5	15.5	21.5	19.5	30.0	26.0	20.5	20.0	21.0	17.5
25	12.5	11.5	17.0	15.5	21.5	19.0	30.0	27.0	21.0	19.0	21.5	18.5
26	13.0	12.5	16.5	15.5	22.5	19.0	29.0	27.0	22.0	19.0	22.0	19.5
27	13.5	12.5	17.0	15.0	24.5	20.0	27.5	25.0	23.0	20.5	22.0	19.5
28	14.5	12.5	18.0	16.5	25.5	22.0	27.0	24.5	25.0	20.5	22.0	19.0
29	14.5	13.0	18.0	16.5	23.5	22.5	27.5	24.5	25.0	21.5	21.0	18.5
30	14.0	13.5	18.5	17.0	22.5	21.0	27.5	25.0	24.0	22.5	21.0	19.0
31	---	---	20.0	18.0	---	---	27.5	24.5	25.0	22.5	---	---
MONTH	14.5	9.0	22.0	13.0	27.5	19.0	30.0	19.5	29.5	19.0	25.0	16.0

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR—Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	3	1	2	---	---	---	10	10	10
2	---	2	---	3	0	2	---	---	---	10	10	10
3	---	---	---	2	0	1	---	---	---	10	10	10
4	3	2	3	2	0	1	---	---	---	10	10	10
5	3	2	2	1	0	1	---	---	---	120	10	50
6	3	2	2	1	0	1	---	---	---	150	50	100
7	2	2	2	4	0	2	---	---	---	50	20	30
8	2	1	2	4	0	2	---	---	---	30	10	20
9	2	1	1	1	0	1	---	---	---	10	10	10
10	2	1	1	3	0	2	---	---	---	10	10	10
11	2	0	1	1	0	1	---	---	---	10	10	10
12	2	0	1	1	0	1	---	---	---	9	---	---
13	2	0	1	2	0	1	---	---	---	9	---	---
14	2	0	1	1	0	1	---	---	---	8	7	7
15	2	0	1	1	0	0	---	---	---	15	7	8
16	2	1	1	3	0	1	90	40	60	100	10	30
17	2	1	1	1	0	1	40	30	40	100	6	45
18	2	1	2	2	0	1	40	20	30	65	25	40
19	2	0	1	1	0	1	20	10	20	25	20	20
20	---	---	---	1	0	0	10	10	10	20	10	15
21	---	---	---	4	0	2	10	5	10	15	10	15
22	2	0	1	4	0	2	10	10	10	15	---	---
23	2	1	1	6	0	4	80	10	40	---	---	---
24	3	0	1	100	5	---	---	---	---	---	---	---
25	3	1	2	---	30	---	---	---	---	---	---	---
26	3	2	2	30	20	20	---	---	---	---	---	---
27	4	1	2	15	4	10	---	---	---	---	---	---
28	2	0	1	---	---	---	---	---	---	8	7	7
29	1	0	1	---	---	---	10	10	10	7	6	7
30	3	1	2	---	---	---	30	10	20	7	5	6
31	3	1	2	---	---	---	40	10	20	6	5	6
MONTH	4	0	1	100	0	2	90	5	25	150	5	20

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	25	5	9	3	3	3	5	3	4	4	4	4
2	100	10	---	3	3	3	4	3	4	4	3	3
3	100	100	---	3	2	3	3	3	3	3	3	3
4	100	85	---	3	3	3	4	3	4	3	2	3
5	70	35	45	6	2	4	25	4	10	3	2	3
6	30	20	25	4	3	4	15	10	15	3	2	2
7	65	20	30	4	3	3	15	10	10	2	2	2
8	100	50	---	4	3	3	10	9	10	2	2	2
9	40	10	20	4	3	3	9	7	8	3	2	2
10	25	5	10	5	3	4	7	6	6	2	2	2
11	10	5	8	5	4	5	6	5	5	2	2	2
12	10	10	10	5	4	5	5	4	5	2	1	2
13	10	10	10	5	4	4	5	4	4	2	1	2
14	10	10	10	4	3	4	5	4	4	2	1	2
15	10	10	10	4	3	4	5	4	4	2	1	2
16	10	5	6	4	3	3	5	4	4	3	2	2
17	7	5	6	3	3	3	4	4	4	3	2	2
18	6	6	6	3	2	3	4	4	4	3	2	3
19	6	5	6	3	2	2	5	4	4	3	2	2
20	6	5	5	2	2	2	5	4	4	3	2	2
21	6	5	5	2	2	2	5	4	4	2	2	2
22	5	5	5	3	2	2	7	4	5	2	2	2
23	6	4	5	10	2	5	9	5	6	3	2	2
24	4	4	4	9	5	6	9	6	7	4	2	3
25	4	4	4	6	4	5	7	7	7	4	3	3
26	4	3	4	6	4	5	8	7	7	3	3	3
27	4	3	3	4	3	3	7	6	7	3	3	3
28	4	3	3	3	2	3	7	6	7	3	3	3
29	---	---	---	3	2	3	6	5	6	4	3	3
30	---	---	---	4	2	3	5	4	5	4	3	4
31	---	---	---	4	3	3	---	---	---	4	3	4
MONTH	100	3	10	10	2	3	25	3	6	4	1	3

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR—Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4	3	4	3	2	2	2	1	2	6	5	5
2	4	3	4	3	3	3	3	2	2	6	5	5
3	4	4	4	3	3	3	3	2	2	6	5	5
4	4	4	4	3	3	3	3	2	2	6	5	5
5	4	4	4	3	3	3	2	1	2	6	5	6
6	4	3	3	9	3	5	2	1	1	6	6	6
7	3	3	3	7	3	4	3	2	2	6	5	6
8	3	3	3	4	3	4	3	2	2	6	5	6
9	3	3	3	4	3	4	2	2	2	7	5	6
10	3	3	3	4	4	4	2	1	2	15	8	10
11	3	3	3	5	4	4	2	1	1	10	10	10
12	3	3	3	4	4	4	2	2	2	15	10	10
13	3	2	3	4	3	4	2	1	1	10	9	9
14	3	3	3	4	3	3	1	1	1	10	8	9
15	4	3	3	3	3	3	1	1	1	9	6	8
16	6	3	4	3	2	3	1	1	1	7	6	7
17	6	3	3	3	2	2	---	---	---	7	6	6
18	3	2	2	3	2	2	---	---	---	8	6	6
19	8	2	4	2	2	2	---	---	---	7	6	6
20	10	3	5	2	1	2	---	---	---	7	6	6
21	4	2	3	2	1	1	---	---	---	7	6	6
22	3	2	2	1	1	1	---	---	---	6	5	6
23	2	2	2	2	1	1	---	---	---	6	5	6
24	2	2	2	1	0	1	---	---	---	6	5	6
25	2	2	2	1	0	0	---	---	---	6	5	6
26	2	2	2	2	0	1	---	---	---	6	5	5
27	2	2	2	2	1	2	---	---	---	7	5	5
28	2	2	2	3	2	2	---	---	---	6	5	5
29	2	2	2	3	2	2	---	---	---	6	5	5
30	3	2	2	3	2	2	---	---	---	6	5	5
31	---	---	---	3	1	2	5	5	5	---	---	---
MONTH	10	2	3	9	0	3	5	1	2	15	5	6

14312500 LAKE CREEK NEAR DIAMOND LAKE, OR

LOCATION.--Lat 43°11'10", long 122°09'55", in NW¼SW¼ sec.30, T.27 S., R.6 E., Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, on right bank 260 ft (79 m) downstream from outlet of Diamond Lake, 1.6 mi (2.6 km) northwest of town of Diamond Lake, and at mile 10.7 (17.2 km).

DRAINAGE AREA.--54.9 mi^2 (142.2 km^2).

PERIOD OF RECORD.--May 1922 to September 1925 (no winter records), October 1926 to September 1929, April, July, August 1930, October 1930 to September 1953, October 1971 to October 1977, February 1978 to current year. Prior to October 1971 published as "at Diamond Lake, near Fort Klamath."

GAGE.--Water-stage recorder. Altitude of gage is 5,180 ft (1,580 m), from river-profile map. Prior to May 26, 1931, nonrecording gage at site 300 ft (91 m) downstream at different datum. May 26, 1931, to Oct. 6, 1933, nonrecording gage at present site and datum.

REMARKS.--Records fair. Flow regulated by gates and fish racks at lake outlet. No diversion above station.

AVERAGE DISCHARGE.--32 years (water years 1927-29, 1931-53, 1972-77), 57.1 ft^3/s (1.617 m^3/s), 41,370 acre-ft/yr (51.0 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 336 ft^3/s (9.52 m^3/s) Jan. 1, 1943, gage height, 2.8 ft (0.85 m), from rating curve extended above 120 ft^3/s (3.40 m^3/s); no flow Aug. 25-27, 1931, Sept. 19, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during periods October and February to September, 125 ft^3/s (3.54 m^3/s) Oct. 1, gage height, 2.18 ft (0.664 m); minimum daily, 0.90 ft^3/s (0.025 m^3/s) Aug. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118				64	61	55	55	49	41	24	7.1
2	107				69	60	56	59	46	44	24	5.2
3	97				76	60	56	58	46	45	23	6.6
4	92				73	59	63	55	46	45	23	5.5
5	90				72	58	73	53	46	44	24	7.1
6	95				73	58	73	52	48	42	25	8.8
7	90				76	58	72	52	46	42	25	9.1
8	86				80	59	72	52	46	42	25	15
9	81				78	59	70	52	45	40	24	25
10	80				76	58	69	52	45	35	23	21
11	72				75	56	67	55	46	35	22	21
12	64				73	56	53	60	44	34	21	21
13	60				72	56	39	59	44	33	8.0	23
14	56				70	56	41	58	42	33	.90	24
15	50				72	56	40	63	41	32	1.0	24
16	45				72	55	41	62	40	31	1.1	24
17	41				70	53	41	60	40	30	1.2	24
18	39				70	53	37	59	40	30	1.3	27
19	36				69	52	40	59	40	29	1.4	27
20	34				67	52	39	59	42	28	1.6	28
21	32				67	52	42	59	45	26	1.8	26
22	32				66	50	49	56	44	21	1.9	27
23	34				65	53	49	55	42	20	1.8	27
24	40				64	55	55	56	41	25	2.2	25
25	45				64	53	48	56	41	25	1.1	26
26	44				63	52	52	56	40	25	1.3	29
27	42				62	52	52	55	40	23	4.1	25
28	48				62	52	52	52	41	23	5.5	25
29	52				---	52	52	50	42	23	6.3	34
30	52				---	53	53	52	42	23	6.8	41
31	53				---	53	---	50	---	23	7.8	---
TOTAL	1907				1960	1712	1601	1731	1300	992	340.10	638.4
MEAN	61.5				70.0	55.2	53.4	55.8	43.3	32.0	11.0	21.3
MAX	118				80	61	73	63	49	45	25	41
MIN	32				62	50	37	50	40	20	.90	5.2
AC-FT	3780				3890	3400	3180	3430	2580	1970	675	1270

14313000 LEMOLO LAKE NEAR TOKETTE FALLS, OR

LOCATION.--Lat 43°19'10", long 122°11'20", in SE¼NW¼ sec.11, T.26 S., R.5 E., Douglas County, Hydrologic Unit 17100301, at Lemolo No. 1 diversion dam on North Umpqua River, 0.8 mi (1.3 km) downstream from Lake Creek, 13.0 mi (20.9 km) east of town of Toketee Falls, and at mile 93.01 (149.7 km).

DRAINAGE AREA.--170 mi^3 (440 km^2).

PERIOD OF RECORD.--July 1954 to current year. Prior to October 1960, published as Lemolo Reservoir near Toketee Falls.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.).

REMARKS.--Lake is formed by Lemolo No. 1 diversion dam. Storage began July 15, 1954. Usable capacity for normal operation, 12,520 acre-ft (15.4 hm^3) between elevations 4,097.0 ft (1,248.77 m) and 4,148.5 ft (1,264.46 m). Dead storage below 4,097.0 ft (1,248.77 m), 1,040 acre-ft (1.28 hm^3). Water is used for power generation. Figures given herein represent total contents.

COOPERATION.--Gage readings furnished by Pacific Power & Light Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 14,000 acre-ft (17.3 hm^3) Dec. 24, 1964, elevation, 4,149.5 ft (1,264.77 m); minimum observed, 11 acre-ft (13,600 m^3) Mar. 5, 1955, elevation, 4,055.4 ft (1,236.09 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 13,270 acre-ft (16.4 hm^3) Aug. 22, elevation, 4,147.8 ft (1,264.25 m); minimum observed, 1,460 acre-ft (1.80 hm^3) Feb. 24, elevation, 4,102.0 ft (1,250.29 m).

MONTHEND ELEVATION AND CONTENTS AT 0900, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30	4,138.8	9,820	-
Oct. 31	4,122.2	4,800	-5,020
Nov. 30	4,134.8	8,490	+3,690
Dec. 31	4,136.3	8,980	+490
CAL YR 1977	-	-	+6,030
Jan. 31	4,120.2	4,310	-4,670
Feb. 28	4,103.7	1,630	-2,680
Mar. 31	4,107.1	2,010	+380
Apr. 30	4,113.0	2,830	+820
May 31	4,139.9	10,200	+7,370
June 30	4,145.8	12,440	+2,240
July 31	4,145.0	12,120	-320
Aug. 31	4,147.6	13,180	+1,060
Sept.30	4,139.1	9,920	-3,260
WTR YR 1978	-	-	+100

14313501 NORTH UMPQUA RIVER BELOW LEMOLO LAKE, NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°19'20", long 122°11'40", in NW¼NW¼ sec.11, T.26 S., R.5 E., Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, on right bank 0.4 mi (0.6 km) downstream from Lemolo Lake, 13 mi (21 km) east of town of Toketee Falls, and at mile 92.6 (148.9 km).

DRAINAGE AREA.--170 mi^2 (440 km^2).

PERIOD OF RECORD.--October 1927 to December 1945, March 1946 to current year. Published as "below Lake Creek" prior to October 1952, as "below Lake Creek, near Toketee Falls" October 1952 to September 1953, and as "below Lemolo Reservoir near Toketee Falls" October 1953 to September 1960.

REVISED RECORDS.--WSP 1448: Drainage area. WRD OR-75-1: 1964(M).

GAGE.--Water-stage recorder. Altitude of gage is 4,025 ft (1,227 m), from river-profile map. Prior to July 15, 1954, at site 1 mi (2 km) upstream at datum about 65 ft (19.8 m) higher. July 15, 1954, to Sept. 25, 1955, at site 400 ft (122 m) upstream at datum 14.11 ft (4.301 m) higher.

REMARKS.--Records good. Flow regulated since 1954 by Lemolo Lake (see station 14313000); also slightly regulated by Diamond Lake. All records given herein include flow in Lemolo No. 1 power canal which, beginning July 1955, diverts 0.4 mi (0.6 km) above station for power generation with return flow 4.3 mi (6.9 km) downstream.

COOPERATION.--Records of daily power plant generation furnished by Pacific Power and Light Co.

AVERAGE DISCHARGE.--50 years, 424 ft^3/s (12.01 m^3/s), 33.87 in/yr (860 mm/yr), 307,200 acre-ft/yr (379 hm^3/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 4,600 ft^3/s (130 m^3/s) Dec. 25, 1964, from rating curve extended above 450 ft^3/s (12.7 m^3/s) on basis of slope-area measurement of peak flow, gage height, 9.20 ft (2.804 m), from floodmark; minimum, 6.4 ft^3/s (0.18 m^3/s) July 17, 1954.

Combined flow, maximum discharge, 4,680 ft^3/s (133 m^3/s) Dec. 25, 1964, from river rating curve extended above 450 ft^3/s (12.7 m^3/s) on basis of slope-area measurement of peak flow; minimum daily, 9.7 ft^3/s (0.27 m^3/s) May 13, 1955.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 645 ft^3/s (18.3 m^3/s) Dec. 17, gage height, 6.56 ft (1.999 m); minimum, 18 ft^3/s (0.51 m^3/s) Sept. 29.

Combined flow, maximum daily discharge, 1,090 ft^3/s (30.9 m^3/s) Dec. 17; minimum daily, 127 ft^3/s (3.60 m^3/s) June 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	491	490	444	512	427	391	413	329	402	377	255	299
2	488	358	428	510	508	385	404	243	404	383	258	300
3	482	293	149	509	481	391	385	239	128	385	274	303
4	478	297	134	506	487	387	392	244	127	379	290	309
5	387	245	259	414	498	382	396	238	363	380	290	307
6	412	248	370	517	492	382	396	242	383	381	293	452
7	344	247	272	523	481	389	401	242	395	376	316	313
8	344	248	392	522	482	394	458	362	378	365	334	294
9	348	245	482	523	493	350	473	244	376	368	354	298
10	352	248	542	520	499	330	473	233	275	392	326	293
11	347	245	547	517	498	411	470	240	275	382	320	296
12	348	244	550	518	491	390	461	244	393	313	324	346
13	349	278	454	518	506	394	458	245	416	310	322	340
14	351	250	495	521	509	390	459	243	414	314	321	344
15	349	254	689	521	506	388	462	246	415	315	320	364
16	348	332	925	509	502	388	448	366	415	328	320	365
17	349	427	1090	472	489	388	384	372	340	325	302	361
18	345	500	1080	484	428	392	342	373	341	322	297	360
19	275	498	1040	480	441	383	342	366	355	326	330	397
20	337	509	944	485	421	387	331	357	415	356	264	401
21	413	403	772	500	402	393	323	372	397	346	313	398
22	490	512	603	498	407	389	326	359	395	329	294	397
23	490	397	567	499	410	378	329	365	396	339	297	387
24	491	167	566	505	335	367	327	371	397	338	292	392
25	486	132	567	507	395	391	393	457	397	406	310	448
26	484	143	568	512	393	395	390	457	250	393	306	530
27	483	159	543	510	389	445	382	313	387	431	310	528
28	491	237	517	511	390	456	451	326	376	436	307	522
29	488	376	518	517	---	394	477	336	348	447	309	525
30	498	386	515	427	---	408	371	464	386	322	303	524
31	494	---	513	516	---	415	---	382	---	167	304	---
TOTAL	12832	9368	17535	15583	12760	12123	12117	9870	10739	11031	9455	11393
MEAN	414	312	566	503	456	391	404	318	358	356	305	380
MAX	498	512	1090	523	509	456	477	464	416	447	354	530
MIN	275	132	134	414	335	330	323	233	127	167	255	293
AC-FT	25450	18580	34780	30910	25310	24050	24030	19580	21300	21880	18750	22600
MEAN†	332	374	574	427	407	397	418	438	396	351	322	325
CFSM†	1.95	2.20	3.38	2.51	2.39	2.34	2.46	2.58	2.33	2.06	1.89	1.91
IN.†	2.25	2.46	3.89	2.89	2.50	2.70	2.74	2.97	2.60	2.38	2.19	2.13
AC-FT†	20,430	22,270	35,270	26,240	22,630	24,430	24,850	26,950	23,540	21,560	19,810	19,340

CAL YR 1977 TOTAL 127,512 MEAN 349 MAX 1,090 MIN 117 AC-FT 252,900 MEAN† 358 CFSM† 2.11 IN.† 28.56 AC-FT† 258,900
WTR YR 1978 TOTAL 144,806 MEAN 397 MAX 1,090 MIN 127 AC-FT 287,200 MEAN† 397 CFSM† 2.34 IN.† 31.70 AC-FT† 287,300

† Adjusted for change in contents in Lemolo Lake.

14314501 CLEARWATER RIVER ABOVE TRAP CREEK, NEAR TOKETEE FALLS, OR

LOCATION.—Lat 43°14'40", long 122°17'10", in SW¼ sec.1, T.27 S., R.4 E., Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, on right bank 900 ft (274 m) downstream from Clearwater No. 1 diversion dam, 0.4 mi (0.6 km) upstream from Trap Creek, 8.7 mi (14.0 km) east of town of Toketee Falls, and at mile 7.8 (12.6 km).

DRAINAGE AREA.—41.6 mi^2 (107.7 km^2).

PERIOD OF RECORD.—October 1927 to December 1945, March 1946 to current year. Monthly discharge only December 1927 to March 1928, published in WSP 1318. Prior to October 1952, published as "above Trap Creek."

REVISED RECORDS.—WSP 1124: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 3,862.84 ft (1,177.394 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.). Prior to Dec. 1, 1953, at two sites about 0.4 mi (0.6 km) downstream at different datums.

REMARKS.—Records good. All records given herein include flow in Clearwater No. 1 power canal, completed in June 1953, which diverts 900 ft (274 m) above station for generation of power and returns water to Clearwater River 2.5 mi (4.0 km) below station.

COOPERATION.—Records of daily power plant generation furnished by Pacific Power and Light Co.

AVERAGE DISCHARGE.—50 years, 173 ft^3/s (4.889 m^3/s), 56.47 in/yr (1,434 mm/yr), 125,300 acre-ft/yr (154 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.—River only, maximum discharge, 848 ft^3/s (24.0 m^3/s) Dec. 23, 1964, gage height, 7.19 ft (2.192 m); maximum gage height, 7.87 ft (2.399 m) Dec. 23, 1964, log jam; minimum discharge, 0.08 ft^3/s (0.002 m^3/s) Sept. 21, 1977, result of beavers plugging release gate at diversion dam 900 ft (274 m) upstream.

Combined flow, maximum discharge, 1,020 ft^3/s (28.9 m^3/s) Dec. 23, 1964; minimum daily, 91 ft^3/s (2.58 m^3/s) Nov. 4-6, 1931.

EXTREMES FOR CURRENT YEAR.—River only, maximum discharge, 211 ft^3/s (5.98 m^3/s) Dec. 15, gage height, 4.58 ft (1.396 m); minimum, 2.5 ft^3/s (0.071 m^3/s) Oct. 6.

Combined flow, maximum discharge, 433 ft^3/s (12.3 m^3/s) Dec. 15; minimum daily, 122 ft^3/s (3.46 m^3/s) Nov. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	125	175	170	163	168	172	168	151	155	128	132
2	136	131	183	142	171	163	178	168	154	158	138	134
3	137	126	210	200	183	166	172	165	155	160	139	134
4	139	125	199	158	171	167	177	167	159	156	138	143
5	130	126	207	172	174	166	161	163	161	152	137	139
6	134	125	175	168	177	162	173	163	164	151	136	134
7	132	125	197	162	177	167	163	156	192	149	140	130
8	137	124	184	167	187	169	159	168	213	148	139	146
9	131	122	191	173	185	174	160	161	174	144	131	137
10	135	169	172	170	170	162	164	172	170	145	136	157
11	131	135	187	173	177	171	161	168	165	147	142	151
12	144	131	166	169	171	158	161	170	165	143	134	152
13	126	134	232	161	174	171	158	167	164	147	142	141
14	133	136	351	174	171	161	164	171	163	148	139	139
15	128	136	367	173	167	162	162	176	158	139	146	136
16	128	139	291	178	167	160	157	169	155	139	139	138
17	133	143	265	183	170	161	160	171	158	143	141	135
18	132	134	221	223	165	161	157	163	156	139	140	146
19	132	131	219	175	165	162	156	176	155	140	133	139
20	130	133	205	175	164	163	160	163	161	139	136	140
21	133	136	202	179	167	162	162	171	159	137	141	138
22	130	145	198	178	170	167	158	179	159	144	135	135
23	133	138	190	172	168	176	160	172	155	137	141	137
24	132	156	189	167	168	173	158	168	156	139	144	135
25	138	213	183	170	165	164	158	167	156	139	149	134
26	139	276	174	167	168	173	171	161	155	138	141	130
27	147	213	177	169	168	165	168	161	151	137	137	133
28	134	192	180	167	168	170	168	163	156	139	136	140
29	125	193	179	168	---	180	169	161	154	147	138	141
30	131	175	175	166	---	177	164	170	154	139	128	133
31	126	---	169	163	---	180	---	150	---	142	140	---
TOTAL	4128	4487	6413	5332	4791	5181	4911	5168	4848	4480	4284	4159
MEAN	133	150	207	172	171	167	164	167	162	145	138	139
MAX	147	276	367	223	187	180	173	179	213	160	149	157
MIN	125	122	166	142	163	158	156	150	151	137	128	130
CFSM	3.20	3.61	4.98	4.14	4.11	4.01	3.94	4.01	3.89	3.49	3.32	3.34
IN.	3.69	4.01	5.73	4.77	4.28	4.63	4.39	4.62	4.34	4.01	3.83	3.72
AC-FT	8190	8900	12720	10580	9500	10280	9740	10250	9620	8890	8500	8250

CAL YR 1977 TOTAL 55956 MEAN 153 MAX 367 MIN 122 CFSM 3.68 IN 50.04 AC-FT 111000
WTR YR 1978 TOTAL 58182 MEAN 159 MAX 367 MIN 122 CFSM 3.82 IN 52.03 AC-FT 115400

14316001 FISH CREEK AT BIG CAMAS RANGER STATION, NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°13'50", long 122°26'45", in SE¼ sec.10, T.27 S., R.3 E., Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, 0.2 mi (0.3 km) upstream from Camas Creek, 0.7 mi (1.1 km) east of Big Camas ranger station, 3.2 mi (5.1 km) south of town of Toketee Falls, and at mile 4.7 (7.6 km).

DRAINAGE AREA.--68.8 mi^2 (178.2 km^2).

PERIOD OF RECORD.--October 1947 to current year. Prior to October 1952, published as "at Big Camas ranger station."

REVISED RECORDS.--WSP 1448: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,858.52 ft (871.277 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.). Prior to July 10, 1951, water-stage recorder and July 10 to Aug. 10, 1951, nonrecording gage, at site 1,000 ft (305 m) upstream at datum 13.72 ft (4.182 m) higher. Aug. 11 to Nov. 3, 1951, nonrecording gage at site 200 ft (61 m) downstream at different datum. Nov. 4, 1951, to Sept. 30, 1956, water-stage recorder at present site at datum 1.92 ft (0.585 m) higher.

REMARKS.--Records good. All records given herein include flow in Fish Creek power canal (diversion began June 18, 1952), which diverts water 2 mi (3 km) above station for power generation at Fish Creek powerplant; diversion discharged to North Umpqua River 600 ft (183 m) downstream from Toketee powerplant.

COOPERATION.--Records of daily powerplant generation furnished by Pacific Power and Light Co.

AVERAGE DISCHARGE.--31 years, 238 ft^3/s (6.740 m^3/s), 46.98 in/yr (1,193 mm/yr), 172,400 acre-ft/yr (213 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 12,100 ft^3/s (343 m^3/s) Dec. 22, 1964, gage height, 13.9 ft (4.24 m), from floodmark; minimum, 2.3 ft^3/s (0.06 m^3/s) Sept. 25, 1957.

Combined flow, maximum discharge, 12,100 ft^3/s (343 m^3/s) Dec. 22, 1964; minimum daily, 24 ft^3/s (0.68 m^3/s) Jan. 6, 7, 1977.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 4,760 ft^3/s (135 m^3/s) Nov. 25, gage height, 9.30 ft (2.835 m); minimum, 5.6 ft^3/s (0.16 m^3/s) Sept. 26.

Combined flow, peak discharges above base of 900 ft^3/s (25.5 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2130	*4,880	138	-	-	Dec. 14	2030	3,410	96.6	-	-
Dec. 3	0400	976	27.6	-	-						

Minimum daily, 34 ft^3/s (0.96 m^3/s) Oct. 20, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	100	485	314	207	218	326	314	211	135	67	74
2	53	198	477	318	289	206	289	301	213	146	62	47
3	43	128	800	343	660	200	257	297	217	149	62	52
4	50	103	622	342	528	198	243	275	232	136	64	57
5	43	104	495	340	496	209	234	252	226	118	63	68
6	41	102	515	335	480	221	210	226	236	113	64	77
7	45	95	546	311	567	214	208	229	234	116	61	81
8	46	84	441	312	553	298	189	251	219	109	59	101
9	46	74	374	374	466	314	197	268	212	99	53	111
10	41	71	331	380	398	281	225	284	217	102	63	179
11	39	69	446	353	359	263	246	297	203	97	60	151
12	40	66	444	341	315	238	226	267	184	91	62	107
13	35	77	1570	358	277	228	210	290	174	91	76	97
14	36	80	2480	372	254	205	200	317	168	90	58	112
15	38	132	2030	378	233	194	199	388	164	90	64	94
16	35	140	1170	488	217	189	194	336	150	92	71	83
17	35	115	894	564	202	186	176	311	147	89	72	88
18	37	94	696	526	204	192	170	300	144	84	59	98
19	35	84	568	485	216	207	177	302	141	84	62	103
20	34	73	477	437	226	224	175	321	139	77	64	98
21	35	112	429	419	254	247	173	330	137	77	58	91
22	34	241	386	391	270	297	186	316	133	90	85	77
23	38	202	381	345	284	322	200	277	130	78	71	73
24	43	1430	420	309	294	286	207	255	132	71	74	67
25	169	2240	381	288	295	265	246	238	138	73	157	66
26	120	2310	344	262	278	269	376	217	130	72	83	61
27	71	1110	341	247	254	281	381	227	110	77	73	65
28	61	785	345	235	232	289	362	227	119	72	67	62
29	64	692	390	228	---	288	340	232	119	60	66	57
30	143	576	399	214	---	309	320	221	123	73	63	52
31	100	---	356	205	---	305	---	205	---	71	62	---
TOTAL	1706	11687	20033	10814	9306	7643	7142	8571	5102	2922	2125	2549
MEAN	55.0	390	646	349	332	247	238	276	170	94.3	68.5	85.0
MAX	169	2310	2480	564	660	322	381	388	236	149	157	179
MIN	34	66	331	205	202	186	170	205	110	60	53	47
CFSM	.80	5.67	9.39	5.07	4.83	3.59	3.46	4.01	2.47	1.37	1.00	1.24
IN.	.92	6.32	10.83	5.85	5.03	4.13	3.86	4.63	2.76	1.58	1.15	1.38
AC-FT	3380	23180	39740	21450	18460	15160	14170	17000	10120	5800	4210	5060

CAL YR 1977 TOTAL 55695 MEAN 153 MAX 2480 MIN 24 CFSM 2.22 IN 30.11 AC-FT 110500
WTR YR 1978 TOTAL 89602 MEAN 245 MAX 2480 MIN 34 CFSM 3.56 IN 48.45 AC-FT 177700

14316500 NORTH UMPQUA RIVER ABOVE COPELAND CREEK, NEAR TOKETEE FALLS, OR

LOCATION.—Lat 43°17'45", long 122°32'10", in NW¼ sec.24, T.26 S., R.2 E., Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, on left bank 0.6 mi (1.0 km) upstream from Copeland Creek, 4.7 mi (7.6 km) west of town of Toketee Falls, and at mile 67.2 (108.1 km).

DRAINAGE AREA.—475 mi^2 (1,230 km^2).

PERIOD OF RECORD.—September 1949 to current year. Monthly discharge only September 1949, published in WSP 1318. Prior to October 1952, published as "above Copeland Creek."

REVISED RECORDS.—WSP 1448: 1953(M), 1954, drainage area.

GAGE.—Water-stage recorder. Altitude of gage is 1,580 ft (482 m), from river-profile map. Prior to Aug. 1, 1976, on right bank at same datum.

REMARKS.—Records excellent. Considerable fluctuation caused by powerplants upstream; flow slightly regulated by Diamond Lake and by Lemolo Lake (see station 14313000). No diversion above station.

AVERAGE DISCHARGE.—29 years, 1,526 ft^3/s (43.22 m^3/s), 1,106,000 acre-ft/yr (1.36 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 40,700 ft^3/s (1,150 m^3/s) Dec. 22, 1964, gage height, 19.1 ft (5.82 m), from floodmark, from rating curve extended above 7,200 ft^3/s (204 m^3/s) on basis of slope-area measurement of peak flow; minimum, 380 ft^3/s (10.8 m^3/s) Aug. 23, 1977; minimum daily, 565 ft^3/s (16.0 m^3/s) Sept. 13, 1959.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 13,300 ft^3/s (377 m^3/s) Nov. 25, gage height, 13.16 ft (4.011 m); minimum, 579 ft^3/s (16.4 m^3/s) Oct. 13; minimum daily, 613 ft^3/s (17.4 m^3/s) Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	935	1100	2340	1810	1410	1390	1420	1450	1110	1000	705	689
2	917	1100	2350	1580	1550	1270	1450	1330	1180	1000	716	705
3	880	898	3580	1730	3160	1310	1340	1190	954	1030	689	705
4	833	911	2850	1770	2690	1240	1270	1250	960	998	716	721
5	782	782	2340	1800	2360	1320	1360	1150	1100	979	689	727
6	816	822	2380	1660	2220	1300	1230	1140	1190	892	674	874
7	695	787	2370	1660	2330	1280	1240	1140	1170	973	669	935
8	732	816	2210	1620	2490	1360	1300	1170	1180	929	669	743
9	737	748	1950	1680	2180	1420	1270	1120	1130	904	705	799
10	748	669	1890	1750	1980	1390	1330	1140	1110	935	816	998
11	732	748	2060	1760	1810	1400	1350	1240	1060	874	839	1030
12	765	748	2100	1670	1780	1350	1320	1140	1020	857	721	886
13	716	732	4790	1680	1670	1270	1290	1160	1130	845	782	880
14	689	727	7070	1720	1580	1300	1300	1190	1090	822	721	898
15	684	998	6950	1780	1580	1270	1260	1370	1100	827	771	880
16	689	1140	4900	1850	1500	1210	1270	1420	1050	810	771	868
17	679	1090	4260	2200	1420	1160	1170	1450	998	822	822	839
18	727	1130	3560	1940	1420	1170	1050	1350	973	822	684	898
19	613	1080	3010	2060	1450	1210	1100	1320	923	810	674	868
20	689	929	2690	2000	1500	1240	1110	1350	985	839	827	929
21	793	998	2350	1940	1500	1270	1010	1370	1020	851	743	911
22	851	1760	2140	1960	1540	1410	1120	1320	998	827	727	904
23	857	1380	1950	1870	1620	1400	1240	1270	998	799	721	886
24	857	5360	2190	1750	1500	1430	1160	1290	929	833	771	851
25	1040	7330	2110	1720	1490	1340	1250	1330	1010	827	911	857
26	1140	7470	1890	1580	1470	1330	1750	1250	904	851	822	923
27	935	3980	1870	1590	1450	1460	1700	1190	923	862	776	929
28	898	2930	1860	1480	1330	1350	1700	1150	960	898	787	948
29	960	2790	1900	1560	---	1310	1620	1140	917	911	732	929
30	1030	2600	2050	1460	---	1380	1550	1170	954	782	754	954
31	1120	---	1860	1500	---	1380	---	1230	---	648	716	---
TOTAL	25539	54553	87820	54130	49980	40920	39530	38780	31026	27057	23120	25964
MEAN	824	1818	2833	1746	1785	1320	1318	1251	1034	873	746	865
MAX	1140	7470	7070	2200	3160	1460	1750	1450	1190	1030	911	1030
MIN	613	669	1860	1460	1330	1160	1010	1120	904	648	669	689
AC-FT	50660	108200	174200	107400	99140	81160	78410	76920	61540	53670	45860	51500

CAL YR 1977 TOTAL 412012 MEAN 1129 MAX 7470 MIN 585 AC-FT 817200
WTR YR 1978 TOTAL 498419 MEAN 1366 MAX 7470 MIN 613 AC-FT 988600

14316700 STEAMBOAT CREEK NEAR GLIDE, OR

LOCATION.—Lat 43°21'00", long 122°43'40", in N½ sec.32, T.25½ S., R.1 E., Douglas County, Hydrologic Unit 17100301, in Umpqua National Forest, on right bank in Canton Creek Forest Service Park, 200 ft (61 m) downstream from Canton Creek, 19 mi (31 km) northeast of Glide, and at mile 0.5 (0.8 km).

DRAINAGE AREA.—227 mi^2 (588 km^2).

PERIOD OF RECORD.--Annual maximum, water year 1956, June 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,128.55 ft (343.982 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Public Roads). Oct. 7, 1955, to June 13, 1956, nonrecording gage at site 100 ft (30 m) upstream at same datum.

REMARKS.—Records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--22 years, 741 ft^3/s (20.99 m^3/s), 44.33 in/yr (1,126 mm/yr), 536,900 acre-ft/yr (662 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 51,000 ft^3/s (1,440 m^3/s) Dec. 22, 1964, gage height, 25.6 ft (7.80 m), from floodmark, from rating curve extended above 13,000 ft^3/s (368 m^3/s), on basis of slope-area measurement at 17.96 ft (5.474 m); minimum, 30 ft^3/s (0.85 m^3/s) Sept. 15-17, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft^3/s (227 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 24	1800	*21,400	606	*15.66	4.773	Feb. 3	0600	9,340	265	9.94	3.030
Dec. 14	1930	15,600	442	12.98	3.956						

Minimum, 50 ft^3/s (1.42 m^3/s) Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	565	1130	1040	625	413	290	662	227	113	63	73
2	110	895	1380	890	1670	384	349	593	212	153	63	71
3	92	555	4850	997	6730	363	497	519	201	175	63	69
4	80	358	2380	1340	2820	359	527	460	193	155	62	72
5	74	406	1510	1300	1770	377	705	413	182	134	61	95
6	80	722	1440	1370	1390	413	878	370	172	119	61	127
7	130	521	2440	1190	1600	398	691	339	162	110	60	162
8	122	419	1780	965	2560	456	557	316	155	105	58	155
9	101	312	1240	884	2080	514	497	306	150	101	57	210
10	87	248	940	915	1550	481	519	297	180	98	57	686
11	77	210	1180	818	1130	440	493	319	199	93	57	557
12	71	184	1930	755	890	421	417	306	162	92	57	342
13	67	254	8180	738	727	413	370	326	153	89	62	241
14	64	411	10000	738	630	413	339	346	148	86	69	244
15	61	1340	8010	727	643	391	316	1060	153	85	67	215
16	59	1080	3800	1080	634	366	319	1080	141	93	77	172
17	56	605	3180	1750	643	349	319	824	132	91	92	155
18	55	454	2320	1780	777	332	306	639	127	84	86	262
19	54	354	1570	1570	984	323	319	531	125	81	72	278
20	52	288	1160	1570	1040	309	342	460	119	79	67	221
21	52	298	952	1590	902	303	401	409	113	76	72	182
22	51	3390	978	1940	766	309	766	366	112	75	93	160
23	57	2910	1430	1490	672	384	1210	329	109	73	104	138
24	70	13100	3850	1100	602	506	908	319	112	71	105	123
25	251	10800	2270	896	549	432	818	336	115	70	353	113
26	366	7660	1440	789	536	387	1630	306	110	70	167	105
27	230	3090	1110	716	489	356	1530	306	105	69	110	99
28	161	2140	1060	648	448	329	1060	293	101	68	92	95
29	150	1740	1180	616	---	316	830	278	125	67	84	92
30	776	1470	1720	575	---	336	710	256	136	65	79	88
31	645	---	1390	553	---	303	---	238	---	64	76	---
TOTAL	4442	56779	77800	33330	35857	11876	18913	13602	4431	2904	2646	5602
MEAN	143	1893	2510	1075	1281	383	630	439	148	93.7	85.4	187
MAX	776	13100	10000	1940	6730	514	1630	1080	227	175	353	686
MIN	51	184	940	553	448	303	290	238	101	64	57	69
CFSM	.63	8.34	11.1	4.74	5.64	1.69	2.78	1.93	.65	.41	.38	.82
IN.	.73	9.30	12.75	5.46	5.88	1.95	3.10	2.23	.73	.48	.43	.92
AC-FT	8810	112600	154300	66110	71120	23560	37510	26980	8790	5760	5250	11110

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CAL YR 1977  TOTAL  219967   MEAN 603   MAX  13100   MIN 31   CFSM 2.66   IN 36.05   AC-FT  436300
WTR YR 1978  TOTAL  268182   MEAN 735   MAX  13100   MIN 51   CFSM 3.24   IN 43.95   AC-FT  531900
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14318000 LITTLE RIVER AT PEEL, OR

LOCATION.—Lat 43°15'10", long 123°01'30", in NW¼ sec.2, T.27 S., R.3 W., Douglas County, Hydrologic Unit 17100301, on left bank 0.6 mi (1.0 km) southeast of Peel, 0.9 mi (1.5 km) downstream from Cavitt Creek, and at mile 6.3 (10.1 km).

DRAINAGE AREA.--177 mi² (458 km²).

PERIOD OF RECORD.—August 1954 to current year.

GAGE.—Water-stage recorder. Datum of gage is 828.33 ft (252.475 m) National Geodetic Vertical Datum of 1929.

REMARKS.—Records excellent. No regulation. Small diversions for rural domestic use and irrigation above station.

AVERAGE DISCHARGE.—24 years, 475 ft³/s (13.45 m³/s), 36.44 in/yr (926 mm/yr), 344,100 acre-ft/yr (424 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 21,100 ft³/s (598 m³/s) Dec. 11, 1956, gage height, 19.63 ft (5.983 m), from rating curve extended above 5,900 ft³/s (167 m³/s) on basis of slope-area measurement at gage height 16.55 ft (5.044 m); minimum, 14 ft³/s (0.40 m³/s) Sept. 2, 9, 10, 28, 29, 1967, Sept. 25-27, 1974, Aug. 18, 19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Nov. 22, 23, 1953, reached a stage of 20.6 ft (6.28 m), from floodmark, discharge, 22,700 ft³/s (643 m³/s), from rating curve extended above 5,900 ft³/s (167 m³/s) on basis of slope-area measurement at gage height 16.55 ft (5.044 m).

EXTREMES FOR CURRENT YEAR.—Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 24	1730	*10,900	309	*14.32	4.365	Feb. 3	0700	6,060	172	10.18	3.103

Minimum, 20 ft³/s (0.57 m³/s) Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	261	878	665	404	277	168	392	173	92	30	39
2	76	386	1000	593	1130	258	210	346	156	129	29	35
3	61	295	2740	638	4440	245	251	307	142	151	29	33
4	52	205	1620	753	2010	248	335	277	131	149	28	36
5	46	240	1080	1130	1270	273	498	258	121	123	27	65
6	53	474	847	1160	980	290	649	230	113	103	26	101
7	70	354	1010	915	1480	270	568	210	103	91	25	98
8	56	269	967	741	1850	293	462	194	100	84	24	98
9	49	208	764	665	1570	314	408	183	98	77	23	131
10	44	169	623	665	1140	293	380	176	121	74	21	511
11	41	139	697	578	853	283	342	197	119	67	20	445
12	38	121	787	544	686	280	297	191	100	62	23	264
13	36	151	1640	507	558	307	264	191	98	59	31	191
14	35	194	3230	480	480	324	242	197	94	55	31	219
15	33	632	3720	449	507	300	236	441	92	55	30	171
16	32	710	2240	1200	471	277	242	511	85	71	41	138
17	31	444	2320	1510	484	254	224	437	80	67	52	127
18	31	320	1620	1350	578	233	213	353	79	57	39	178
19	30	247	1090	1180	649	216	210	293	79	52	31	159
20	29	196	817	1290	618	199	216	251	76	49	30	134
21	29	316	659	1260	554	191	251	224	73	44	34	117
22	28	2850	578	1350	493	183	350	205	71	42	65	105
23	31	2120	618	1070	445	242	563	191	71	40	64	92
24	44	7170	987	835	404	287	489	216	74	37	58	84
25	130	5430	835	675	369	242	441	317	80	36	213	77
26	153	4770	659	598	361	219	633	287	71	35	100	71
27	105	2330	593	516	331	202	747	280	67	34	68	65
28	82	1570	573	467	300	189	598	258	61	34	54	62
29	80	1280	608	445	---	178	498	236	131	34	47	59
30	288	1080	896	408	---	189	428	213	105	32	42	57
31	303	---	823	380	---	171	---	191	---	31	42	---
TOTAL	2213	34931	37519	25017	25415	7727	11413	8253	2964	2066	1377	3962
MEAN	71.4	1164	1210	807	908	249	380	266	98.8	66.6	44.4	132
MAX	303	7170	3720	1510	4440	324	747	511	173	151	213	511
MIN	28	121	573	380	300	171	168	176	61	31	20	33
CFSM	.40	6.58	6.84	4.56	5.13	1.41	2.15	1.50	.56	.38	.25	.75
IN.	.47	7.34	7.89	5.26	5.34	1.62	2.40	1.73	.62	.43	.29	.83
AC-FT	4390	69290	74420	49620	50410	15330	22640	16370	5880	4100	2730	7860

CAL YR 1977 TOTAL 129142 MEAN 354 MAX 7170 MIN 15 CFSM 2.00 IN 27.14 AC-FT 256200
WTR YR 1978 TOTAL 162857 MEAN 446 MAX 7170 MIN 20 CFSM 2.52 IN 34.23 AC-FT 323000

14319500 NORTH UMPQUA RIVER AT WINCHESTER, OR

LOCATION.--Lat 43°16'20", long 123°24'40", in NW¼NE¼ sec.33, T.26 S., R.6 W., Douglas County, Hydrologic Unit 17100301, on left bank 400 ft (122 m) downstream from county bridge, 3.0 mi (4.8 km) west of Winchester, and at mile 1.8 (2.9 km).

DRAINAGE AREA.--1,344 mi^2 (3,481 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1908 to December 1913, October 1923 to September 1929, August 1954 to current year. Prior to December 1908, monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1448: 1909-12, drainage area. WRD Oreg. 1972: 1965(M).

GAGE.--Water-stage recorder. Datum of gage is 372.97 ft (113.681 m) National Geodetic Vertical Datum of 1929 (Douglas County Road Department bench mark). Oct. 1, 1908, to Dec. 31, 1913, and Oct. 1, 1923, to Sept. 30, 1929, nonrecording gage at site 4.8 mi (7.7 km) upstream at different datums. Aug. 27, 1954, to Aug. 12, 1965, water-stage recorder on right bank at same datum.

REMARKS.--Water-discharge records excellent. Diurnal fluctuation caused by upstream powerplants; slight regulation by Lemolo Lake (see station 14313000) and Diamond Lake. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.--35 years, 3,746 ft^3/s (106.1 m^3/s), 2,714,000 acre-ft/yr (3.35 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150,000 ft^3/s (4,250 m^3/s) Dec. 22, 1964, gage height, 34.2 ft (10.42 m), from floodmark; minimum, 383 ft^3/s (10.8 m^3/s) Sept. 25, 1960; minimum daily, 578 ft^3/s (16.4 m^3/s) Sept. 14, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 29, 1950, reached a stage of 23.2 ft (7.07 m), from floodmark, at site 4.8 mi (7.7 km) upstream at different datum, discharge, 88,000 ft^3/s (2,490 m^3/s). Flood of Nov. 23, 1953, reached a stage of 28.4 ft (8.66 m), from floodmarks, present site and datum, discharge, 93,300 ft^3/s (2,640 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft^3/s (566 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 24	2300	*61,200	1,733	*20.85	6.355
Dec. 3	1030	22,100	626	10.62	3.237
Dec. 15	0200	42,100	1,192	15.97	4.868
Feb. 3	1230	31,000	878	13.16	4.011

Minimum, 722 ft^3/s (20.4 m^3/s) Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1650	2940	6640	5810	3480	2790	2310	3700	2060	1420	764	886
2	1430	3100	6510	5180	4790	2780	2500	3320	1910	1460	801	839
3	1280	3100	16900	4980	24000	2590	2760	2990	1910	1560	816	847
4	1190	2240	12100	5680	14500	2610	2900	2670	1620	1580	794	870
5	1100	2010	8170	6760	9100	2640	3460	2580	1620	1480	816	950
6	1060	2860	6760	7060	7510	2790	4180	2410	1760	1400	786	1110
7	1180	2840	8350	6310	7290	2720	3890	2260	1750	1270	764	1340
8	1100	2330	7830	5570	11600	2790	3360	2170	1750	1340	750	1370
9	1090	1990	6380	4960	10100	3100	3100	2120	1700	1250	742	1230
10	1040	1730	5390	5090	8020	3030	2990	2070	1710	1220	764	2200
11	1020	1490	5020	4790	6440	2950	2970	2150	1770	1230	893	2990
12	974	1480	7010	4580	5490	2890	2790	2270	1630	1140	933	2260
13	991	1440	14900	4250	4810	2810	2590	2150	1590	1120	854	1710
14	933	1680	29500	4250	4160	2790	2500	2200	1630	1090	925	1640
15	886	2950	33900	4230	4420	2730	2500	3360	1610	1060	862	1620
16	878	5260	19600	5740	4160	2590	2470	4480	1580	1100	941	1460
17	862	3590	16700	7870	4080	2430	2440	4040	1510	1100	1000	1370
18	847	2840	13000	8420	4210	2300	2230	3520	1450	1080	1050	1390
19	893	2500	9360	7510	4660	2270	2100	3050	1400	1040	854	1610
20	779	2200	7390	7650	4790	2270	2240	2790	1340	1020	809	1480
21	824	2050	6240	7440	4560	2240	2380	2650	1400	1030	991	1450
22	958	10300	5550	8860	4210	2270	2820	2520	1410	1030	966	1370
23	1050	13300	6090	7680	3960	2530	4620	2400	1380	1000	1020	1300
24	1100	32600	10300	6290	3830	3000	4270	2380	1390	950	1010	1260
25	1200	37600	9260	5320	3450	2860	3750	2760	1330	983	1390	1190
26	2150	37000	6800	4870	3410	2580	4750	2670	1400	983	1610	1230
27	1910	16600	5740	4290	3250	2460	6260	2530	1240	1000	1180	1320
28	1530	11400	5450	4000	3070	2560	5130	2370	1260	1030	1040	1250
29	1400	8780	5360	3830	---	2310	4520	2240	1350	1050	1010	1220
30	2120	8120	7340	3640	---	2360	4020	2140	1440	1050	925	1190
31	3080	---	6940	3430	---	2370	---	2110	---	917	933	---
TOTAL	38505	228320	316480	176340	177350	81410	98800	83070	46900	35983	28993	41952
MEAN	1242	7611	10210	5688	6334	2626	3293	2680	1563	1161	935	1398
MAX	3080	37600	33900	8860	24000	3100	6260	4480	2060	1580	1610	2990
MIN	779	1440	5020	3430	3070	2240	2100	2070	1240	917	742	839
CFSM	.92	5.66	7.60	4.23	4.71	1.95	2.45	1.99	1.16	.86	.70	1.04
IN.	1.07	6.32	8.76	4.88	4.91	2.25	2.73	2.30	1.30	1.00	.80	1.16
AC-FT	76370	452900	627700	349800	351800	161500	196000	164800	93030	71370	57510	83210

CAL YR 1977 TOTAL 1079028 MEAN 2956 MAX 37600 MIN 669 CFSM 2.20 IN 29.87 AC-FT 2140000
WTR YR 1978 TOTAL 1354103 MEAN 3710 MAX 37600 MIN 742 CFSM 2.76 IN 37.48 AC-FT 2686000

14319500 NORTH UMPQUA RIVER AT WINCHESTER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-69, 1971 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: January 1971 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 26.5°C Aug. 10, 1972, Aug. 8, 9, 1978; minimum, 0.0°C Jan. 6, 1971, Dec. 8-16, 1972, Jan. 6, 7, 1974, Jan. 8-10, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 26.5°C Aug. 8, 9; minimum, 1.5°C Nov. 21.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	9.5	9.0	8.0	7.5	5.0	4.5	6.5	6.0	6.0	5.0
2	---	---	9.5	9.0	8.0	7.5	4.5	4.0	6.5	6.0	5.0	4.5
3	---	---	9.0	8.0	8.5	8.0	5.5	4.5	7.5	6.5	6.5	5.0
4	---	---	7.5	6.5	8.5	8.0	6.0	5.5	7.5	7.0	7.0	7.0
5	13.0	---	6.5	6.5	8.0	7.0	6.5	6.0	7.5	7.0	8.0	7.0
6	12.5	11.5	8.0	6.5	7.5	7.0	6.5	6.0	7.5	7.0	8.5	7.5
7	12.0	11.0	8.5	8.0	7.5	7.0	6.0	6.0	7.5	7.0	8.5	8.0
8	11.5	11.0	8.0	7.0	7.0	5.5	6.5	6.0	6.5	6.0	8.0	8.0
9	11.5	10.5	7.0	6.0	5.0	5.0	7.0	6.5	6.5	6.0	8.5	8.0
10	12.0	10.5	6.5	5.5	6.0	5.0	7.5	6.5	6.0	5.0	8.5	7.5
11	12.5	11.0	6.5	6.0	6.5	6.0	6.5	6.0	5.0	4.5	8.0	7.5
12	12.5	11.5	7.0	5.5	7.0	6.5	6.0	5.5	4.5	4.0	8.0	6.5
13	12.0	11.5	8.0	6.5	8.5	7.0	7.0	6.0	5.0	4.5	8.0	7.5
14	12.5	11.5	7.5	7.0	9.0	8.5	7.0	6.5	5.0	4.5	7.5	6.5
15	12.5	12.0	8.0	7.5	9.0	6.5	7.0	6.5	6.0	5.0	7.5	6.0
16	12.5	11.5	8.5	8.0	6.5	6.0	7.0	6.5	5.5	5.0	7.5	6.5
17	12.0	11.0	8.0	7.0	6.5	6.0	7.5	7.0	5.5	4.5	8.5	7.5
18	12.0	11.0	7.0	5.5	6.0	5.5	7.0	6.5	6.5	5.5	9.5	8.5
19	12.5	11.5	5.5	4.0	5.5	5.0	7.0	6.5	7.5	6.0	10.5	9.5
20	11.5	11.0	4.0	2.5	5.0	4.0	7.5	7.0	7.5	6.5	11.0	10.0
21	11.5	10.5	2.5	1.5	5.5	4.0	7.5	7.0	7.5	6.5	11.0	10.5
22	11.0	10.0	5.5	2.0	6.0	5.5	7.0	6.0	8.0	7.0	11.0	10.5
23	11.5	10.5	6.5	5.5	6.0	5.5	6.0	5.0	8.0	7.5	11.0	10.0
24	11.0	10.5	7.5	6.5	7.0	6.0	5.0	4.5	8.0	7.0	10.0	9.0
25	11.5	10.5	8.5	7.5	6.5	6.0	5.0	4.5	7.5	7.0	10.0	8.0
26	11.0	10.5	8.5	8.0	6.0	5.5	6.0	5.0	7.5	7.0	10.0	9.0
27	10.5	10.0	8.0	7.5	5.5	5.0	6.0	5.5	7.5	6.5	11.0	9.0
28	10.0	9.5	7.5	7.5	6.0	5.5	6.0	5.5	7.0	6.0	11.0	10.5
29	9.5	9.0	8.0	7.[illegible]	6.5	6.0	6.5	6.0	---	---	10.5	10.5
30	9.5	9.0	8.5	8.[illegible]	6.5	6.0	7.0	6.5	---	---	11.5	10.5
31	9.0	9.0	---	---	6.0	5.5	6.5	6.0	---	---	11.0	10.5
MONTH	13.0	9.0	9.5	1.5	9.0	4.0	7.5	4.0	8.0	4.0	11.5	4.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.5	9.5	11.0	9.5	18.0	16.0	17.0	16.0	24.0	21.5	21.0	19.0
2	9.5	9.0	11.5	9.5	19.5	17.0	17.5	15.5	24.5	21.5	21.5	20.0
3	9.0	8.5	12.5	10.5	20.0	18.0	17.0	16.5	25.0	22.0	21.0	20.0
4	8.5	7.5	12.0	11.0	21.5	18.5	17.5	15.5	24.5	22.0	20.0	19.0
5	9.0	8.0	11.0	10.0	22.5	19.5	19.0	15.5	24.0	21.5	19.5	19.0
6	8.0	7.0	12.0	10.0	22.0	20.0	20.5	17.5	24.5	21.5	19.0	18.0
7	8.5	6.5	13.0	11.0	21.0	19.5	21.5	19.0	25.5	22.0	18.0	17.0
8	9.0	6.5	14.0	12.0	21.0	19.0	20.5	19.0	26.5	23.5	17.0	16.0
9	10.5	8.0	14.5	13.5	19.5	17.5	19.0	18.0	26.5	23.5	16.5	15.5
10	11.5	9.0	13.5	12.5	17.5	16.0	20.0	17.0	26.0	23.5	15.5	15.0
11	11.5	10.0	13.0	12.0	18.5	15.5	21.0	18.5	24.5	23.0	15.0	14.5
12	11.5	10.0	12.0	11.5	18.5	17.0	22.0	19.0	22.5	21.0	14.5	14.0
13	11.0	9.5	11.5	11.5	18.0	16.0	23.0	20.0	21.0	19.5	14.5	14.0
14	9.5	8.5	11.5	11.0	17.0	16.0	24.5	21.5	21.5	18.5	15.0	14.0
15	8.5	8.5	11.5	11.0	17.5	15.5	23.0	21.5	20.0	19.5	15.5	14.5
16	8.5	7.5	12.0	10.0	18.5	16.0	21.5	20.5	19.0	18.5	15.0	14.5
17	8.5	8.0	12.5	10.0	19.5	16.5	22.0	19.5	19.5	17.5	15.0	14.5
18	9.5	8.0	14.0	11.0	19.5	18.0	22.5	19.5	19.5	17.0	14.5	14.0
19	10.0	9.0	15.5	13.0	20.0	17.0	23.0	20.0	20.0	18.5	14.0	13.0
20	9.5	8.5	16.5	14.5	20.5	18.0	24.0	21.0	19.5	19.0	14.0	13.0
21	9.5	9.0	16.5	13.5	20.0	18.5	24.5	21.5	18.5	18.0	13.5	13.5
22	9.0	8.5	13.5	12.5	19.5	17.5	25.0	22.5	18.0	17.5	15.0	13.5
23	8.5	7.5	13.0	12.0	18.0	17.0	26.0	23.0	17.5	17.0	16.0	14.5
24	9.0	7.5	12.5	11.0	17.5	16.0	26.0	23.0	17.0	16.5	16.0	15.5
25	10.0	9.0	12.0	10.5	17.0	16.0	26.0	23.0	16.5	15.5	16.5	15.5
26	10.0	9.5	12.0	11.5	19.0	16.0	25.5	23.5	17.5	16.0	16.5	16.0
27	9.5	8.5	12.5	11.5	20.5	17.0	23.5	21.5	19.5	16.5	16.5	16.0
28	10.5	9.0	14.0	12.5	21.0	19.0	22.5	20.5	20.0	18.0	16.0	15.5
29	11.0	9.5	15.0	13.0	20.0	18.5	23.5	20.5	21.0	19.0	16.0	15.0
30	11.0	10.0	16.0	14.5	18.5	17.0	24.0	21.5	20.5	19.5	15.5	15.5
31	---	---	17.0	15.0	---	---	24.0	21.5	20.0	19.0	---	---
MONTH	11.5	6.5	17.0	9.5	22.5	15.5	26.0	15.5	26.5	15.5	21.5	13.0

14319900 CALAPOOYA CREEK AT NONPAREIL, OR

LOCATION.--Lat 43°25'04", long 123°09'13", in SW¼SE¼ sec.3, T.25 S., R.4 W., Douglas County, Hydrologic Unit 17100303, on left bank 0.3 mi (0.5 km) upstream from county road bridge, 0.9 mi (1.4 km) northeast of Nonpareil, and at mile 26.7 (43.0 km).

DRAINAGE AREA.--88.6 mi² (229.5 km²), revised.

PERIOD OF RECORD.--July 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 699.22 ft (213.122 m) National Geodetic Vertical Datum of 1929 (Douglas County Survey bench mark).

REMARKS.--Records good. No regulation. Only minor diversions by pumping for irrigation above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft³/s (110 m³/s) Nov. 24, 1977, gage height, 8.42 ft (2.566 m); minimum, 5.3 ft³/s (0.15 m³/s) Aug. 17-19, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s (76.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 24	1800	*3,900	110	*8.42	2.566	Dec. 14	2000	3,230	91.5	7.74	2.359

Minimum, 16 ft³/s (0.45 m³/s) Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	190	434	380	222	123	77	222	110	40	20	18
2	50	249	442	332	390	117	99	191	97	51	20	17
3	42	198	1230	335	1560	110	119	164	85	58	20	16
4	37	152	803	332	853	110	157	147	77	59	20	18
5	33	176	588	512	571	121	233	135	71	51	20	38
6	37	284	492	597	427	121	233	121	66	44	20	51
7	57	231	615	480	431	115	194	110	61	41	20	56
8	54	182	588	390	664	128	159	102	59	40	18	46
9	47	147	473	342	615	128	140	95	56	40	17	63
10	40	122	376	306	488	121	123	93	70	38	16	188
11	37	106	369	271	390	119	110	97	70	34	16	170
12	33	93	394	248	326	121	102	93	59	34	17	95
13	3	115	793	239	275	123	95	89	59	33	23	73
14	28	122	1960	228	242	121	97	135	56	32	24	77
15	27	216	2220	225	322	115	110	271	59	32	21	68
16	26	261	1490	545	325	108	121	256	53	38	29	56
17	26	204	1270	606	312	102	130	219	49	37	30	53
18	25	173	905	525	312	97	123	183	46	32	20	58
19	23	147	637	473	302	91	123	152	48	30	17	53
20	23	125	488	461	278	85	128	130	44	29	16	46
21	22	135	390	492	245	81	157	115	43	27	19	41
22	22	1280	339	673	219	77	259	108	44	24	25	38
23	28	1170	476	571	196	123	383	102	43	23	27	37
24	42	2290	818	446	180	149	306	135	46	23	29	33
25	100	2210	623	366	162	121	259	262	46	23	56	32
26	118	1810	469	318	159	108	480	213	43	22	32	30
27	93	1010	383	275	147	99	484	196	40	22	24	29
28	76	687	322	245	133	91	369	180	37	22	21	28
29	74	606	345	225	---	87	293	164	38	23	18	25
30	243	529	567	205	---	85	248	144	40	21	18	24
31	216	---	476	202	---	79	---	128	---	20	19	---
TOTAL	1772	15220	21774	11845	10748	3376	5911	4752	1717	1043	692	1577
MEAN	57.2	507	702	382	384	109	197	153	57.2	33.6	22.3	52.6
MAX	243	2290	2220	673	1560	149	484	271	110	59	56	188
MIN	22	93	322	202	133	77	77	89	37	20	16	16
CFSM	.65	5.72	7.92	4.31	4.33	1.23	2.22	1.73	.65	.38	.25	.59
IN.	.74	6.39	9.14	4.97	4.51	1.42	2.48	2.00	.72	.44	.29	.66
AC-FT	3510	30190	43190	23490	21320	6700	11720	9430	3410	2070	1370	3130

CAL YR 1977 TOTAL 63472.3 MEAN 174 MAX 2290 MIN 5.3 CFSM 1.96 IN 26.65 AC-FT 125900
WTR YR 1978 TOTAL 80427.0 MEAN 220 MAX 2290 MIN 16 CFSM 2.48 IN 33.77 AC-FT 159500

14321000 UMPQUA RIVER NEAR ELKTON, OR
(National stream-quality accounting network station)

LOCATION.--Lat 43°35'10", long 123°33'15", in NW¼ sec.8, T.23 S., R.7 W., Douglas County, Hydrologic Unit 17100303, on left bank 3.5 mi (5.6 km) south of Elkton, 8.3 mi (13.4 km) upstream from Elk Creek, and at mile 56.9 (91.6 km).

DRAINAGE AREA.--3,683 mi^2 (9,539 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1905 to current year.

REVISED RECORDS.--WSP 1184: 1927(M), 1938(M), 1943(M), 1946(M). WSP 1448: 1911-13, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 90.42 ft (27.560 m) National Geodetic Vertical Datum of 1929. Prior to June 29, 1972, at site 2,400 ft (732 m) downstream at same datum. See WSP 1931 or 2135 for history of changes prior to June 29, 1972.

REMARKS.--Water-discharge records excellent. Regulation by powerplants on North Umpqua River ordinarily does not affect discharge at this station. Diversions for irrigation above station.

AVERAGE DISCHARGE.--73 years, 7,504 ft^3/s (212.5 m^3/s), 27.67 in/yr (703 mm/yr), 5,437,000 acre-ft/yr (6.70 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 265,000 ft^3/s (7,500 m^3/s) Dec. 23, 1964, gage height, 51.95 ft (15.834 m), from floodmarks; minimum observed, 640 ft^3/s (18.1 m^3/s) July 18, 1926.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least December 1861, that of Dec. 23, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 52,000 ft^3/s (1,470 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	0600	*121,000	3,430	*32.03	9.763
Dec. 15	0730	75,800	2,150	24.05	7.330
Feb. 3	1830	80,600	2,280	24.93	7.600

Minimum, 884 ft^3/s (25.0 m^3/s) Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3240	3760	13000	14000	6540	5450	4000	6520	3040	1900	1080	1160
2	2360	3730	11200	11900	7690	5130	4140	6040	2880	1880	968	1130
3	1910	4210	19800	11000	51200	4970	4670	5500	2710	1880	921	1090
4	1660	3690	27500	11500	50300	4760	4860	5000	2560	2010	949	1100
5	1510	3080	17800	16100	26100	4700	5540	4800	2230	2070	940	1140
6	1390	2910	13300	29400	19100	5080	7590	4400	2190	1960	940	1210
7	1350	4420	12700	20400	15800	5130	8460	4200	2310	1800	940	1390
8	1400	4150	13800	15400	28800	5060	7400	4000	2210	1630	940	1750
9	1360	3400	11900	12900	29400	5350	6350	3800	2200	1630	912	1860
10	1360	2850	9950	12000	23800	6000	5710	3800	2160	1530	894	1840
11	1300	2450	8900	11500	17900	5890	5430	3800	2200	1470	884	3660
12	1260	2090	10800	10700	14200	5720	5150	3800	2250	1470	958	4740
13	1210	2030	16900	9900	12000	5520	4770	3800	2140	1390	1020	3730
14	1180	1970	46000	9500	10300	5450	4490	4000	2090	1360	996	2800
15	1160	2200	56800	9270	9550	5320	4540	4600	2050	1300	987	2500
16	1120	4790	35200	11700	9500	5060	4700	5610	2000	1290	1030	2310
17	1090	6040	36000	28900	9040	4790	4700	6210	1960	1300	1020	2030
18	1080	4690	30300	23100	8870	4510	4540	5520	1880	1300	1090	1910
19	1070	3880	22000	19100	9380	4240	4210	4830	1800	1290	1130	1920
20	1070	3340	16200	17400	9710	4080	4100	4290	1730	1260	1080	2150
21	1050	3080	13100	16300	9450	3980	4420	3930	1700	1230	1020	2090
22	1020	5150	11200	18800	8770	3910	5210	3750	1750	1210	1100	1980
23	1100	31400	10700	18500	8080	4020	7330	3530	1730	1200	1130	1850
24	1220	40900	22400	15100	7520	4740	8850	3500	1710	1160	1230	1750
25	1260	95500	22500	12500	6990	5600	7640	3640	1710	1110	1290	1670
26	1380	74400	16000	10900	6500	5150	7120	4280	1660	1090	1610	1580
27	2360	40900	12500	9690	6270	4650	9690	4030	1720	1100	1950	1580
28	2410	25500	11600	8740	5850	4400	9450	3800	1580	1100	1710	1630
29	2010	18100	11200	7860	---	4290	8210	3530	1550	1120	1430	1570
30	1890	15500	13400	7330	---	4020	7170	3310	1620	1140	1280	1520
31	2950	---	16600	6760	---	4080	---	3140	---	1140	1200	---
TOTAL	47730	420110	591250	438150	428610	151050	180440	134960	61320	44320	34629	58640
MEAN	1540	14000	19070	14130	15310	4873	6015	4354	2044	1430	1117	1955
MAX	3240	95500	56800	29400	51200	6000	9690	6520	3040	2070	1950	4740
MIN	1020	1970	8900	6760	5850	3910	4000	3140	1550	1090	884	1090
CFSM	.42	3.80	5.18	3.84	4.16	1.32	1.63	1.18	.56	.39	.30	.53
IN.	.48	4.24	5.97	4.43	4.33	1.53	1.82	1.36	.62	.45	.35	.59
AC-FT	94670	833300	1173000	869100	850100	299600	357900	267700	121600	87910	68690	116300

CAL YR 1977 TOTAL 1784938 MEAN 4890 MAX 95500 MIN 770 CFSM 1.33 IN 18.03 AC-FT 3540000
WTR YR 1978 TOTAL 2591209 MEAN 7099 MAX 95500 MIN 884 CFSM 1.93 IN 26.17 AC-FT 5140000

14321000 UMPQUA RIVER NEAR ELKTON, OR--Continued
(National stream quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: April 1971 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 30.0°C July 14, 1971; minimum, 0.0°C Jan. 7, 8, 11, 12, and probably Jan. 9, 10, 1974.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 28.0°C Aug. 9; minimum, 3.5°C Nov. 22, 23.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT 26...	1030	1360	13.5	6.6	10.8	86	K16	29	18	6.9
NOV 28...	1145	25500	8.5	6.6	11.2	65	280	410	15	6.5
DEC 20...	1045	16300	6.0	7.0	12.1	67	270	100	17	6.5
JAN 23...	1030	15100	7.0	6.9	11.9	72	150	130	17	6.9
FEB 22...	1600	8680	9.0	7.0	11.5	79	44	60	18	7.0
MAR 22...	1500	3860	13.5	7.2	11.8	81	K3	K15	17	9.4
APR 19...	1500	4120	12.0	6.8	10.8	86	K17	<1	16	7.5
MAY 17...	1545	5940	15.0	6.7	10.5	79	22	K3	17	7.1
JUN 13...	1530	2140	20.0	7.4	9.3	62	K3	140	17	9.4
JUL 25...	1730	1070	27.5	7.5	8.2	86	K3	260	16	7.4
AUG 16...	1630	1010	23.4	7.5	9.9	80	K8	42	19	5.6
SEP 20...	1620	2200	17.8	7.3	10.1	87	K9	34	16	8.0

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT 26...	2.9	5.8	1.2	34	4.3	4.5	.1	--	--
NOV 28...	2.0	2.7	.6	22	2.9	3.4	.0	.23	--
DEC 20...	2.4	3.3	.6	25	4.7	2.7	.1	1.0	--
JAN 23...	2.7	4.5	.5	28	3.9	2.5	.1	.05	.31
FEB 22...	2.9	3.6	.7	25	6.1	2.8	.1	.02	.00
MAR 22...	3.8	5.0	.9	35	3.9	3.6	.1	.11	.15
APR 19...	4.1	4.3	.6	36	6.9	3.5	.1	.21	.23
MAY 17...	2.7	4.0	.6	32	3.1	.2	.1	.98	--
JUN 13...	2.9	4.5	.8	31	5.8	3.3	.1	.08	.13
JUL 25...	3.1	5.4	1.0	31	2.1	3.4	.1	.30	.35
AUG 16...	2.5	5.2	1.1	30	1.8	3.3	.1	.39	.36
SEP 20...	2.7	5.0	.8	31	5.8	3.6	.0	.18	.15

14321000 UMPQUA RIVER NEAR ELKTON, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	HARDNESS (MG/L AS CACO3)
OCT 26...	--	.01	.16	--	.06	--	--	1.7	29
NOV 28...	.06	.14	--	.02	.13	--	--	4.5	24
DEC 20...	.02	.13	--	.02	.06	--	--	2.7	26
JAN 23...	.00	.08	.39	.02	.04	--	--	--	28
FEB 22...	.01	.08	.09	.03	.04	--	--	1.7	29
MAR 22...	.00	.01	.16	.08	.07	--	--	1.1	39
APR 19...	.03	.02	.28	.01	.03	1.6	.5	--	36
MAY 17...	.00	.02	--	.01	.02	--	--	1.6	29
JUN 13...	.01	.01	.15	.02	.00	--	--	1.4	35
JUL 25...	.00	.00	.35	.01	.03	2.1	.6	--	31
AUG 16...	.02	.02	.40	.01	.02	--	--	1.6	24
SEP 20...	.01	.01	.17	.03	.04	--	--	2.1	31

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER DAY)	TURBIDITY (JTU)	TURBIDITY (NTU)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 26...	0	56	65	206	2	--	2	7.3	83
NOV 28...	2	59	46	4060	60	--	137	9430	87
DEC 20...	1	55	53	2420	20	--	35	1540	83
JAN 23...	0	51	55	2080	15	--	21	856	83
FEB 22...	5	49	56	1150	6	--	6	141	93
MAR 22...	4	60	65	625	3	--	5	52	63
APR 19...	0	58	65	645	3	--	6	67	89
MAY 17...	0	53	55	850	--	3.1	6	96	97
JUN 13...	4	51	62	295	--	.70	8	46	74
JUL 25...	0	53	57	153	--	1.2	5	14	77
AUG 16...	0	51	57	139	--	.90	3	8.2	76
SEP 20...	0	55	61	327	--	.60	3	18	91

14321000 UMPQUA RIVER NEAR ELKTON, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	IRON, DIS- SOLVED (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)
OCT 26...	90	130	0	20	2	2	--	--	1
JAN 23...	40	930	0	30	0	0	0	0	0
APR 19...	10	340	0	10	1	0	100	100	1
JUL 25...	50	310	0	20	2	2	200	200	2

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
OCT 26...	<10	5	5	0	<50	5	10	5	<100
JAN 23...	2	0	10	0	0	4	5	0	3
APR 19...	1	0	10	0	0	3	4	1	4
JUL 25...	2	10	10	0	1	5	6	10	18

DATE	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL (UG/L AS SE)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
OCT 26...	--	--	20	20	0	0	.0	.4
JAN 23...	0	0	10	10	0	0	.0	.3
APR 19...	0	0	10	20	0	0	.0	.0
JUL 25...	0	0	0	10	0	0	.0	.0

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO AUGUST 1978

DATE	OCT 26,77		NOV 28,77		APR 19,78		MAY 17,78	
TIME	1030		1145		1500		1545	
TOTAL CELLS/ML	22000		950		410		720	
DIVERSITY: DIVISION	0.3		0.2		0.0		1.3	
.CLASS	0.3		0.2		0.0		1.3	
..ORDER	0.8		0.2		1.0		1.7	
...FAMILY	0.8		0.3		1.9		2.2	
....GENUS	0.8		0.3		1.9		2.2	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	--	-	--	-	--	-
....CHLORELLA	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
....OOCYSTIS	*	0	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-
....TREUBARIA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....CRUCIGENIA	--	-	--	-	--	-	76	11
....SCENEDESMUS	400	2	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	--	-	--	-	230#	57	95	13
....SKELETONEMA	200	1	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....COCCONEIS	--	-	9	1	--	-	--	-
....RHOICOSPHENIA	--	-	*	0	--	-	38	5
...CYMBELLACEAE								
....CYMBELLA	*	0	--	-	14	3	19	3
....EPITHEMIA	--	-	9	1	--	-	--	-
...DIATOMACEAE								
....DIATOMA	--	-	--	-	14	3	--	-
...FRAGILARIACEAE								
....FRAGILARIA	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	54	13	19	3
...GOMPHONEMATACEAE								
....GOMPHONEIS	*	0	--	-	--	-	--	-
....GOMPHONEMA	--	-	9	1	54	13	38	5
...NAVICULACEAE								
....NAVICULA	--	-	--	-	41	10	19	3
...NITZSCHIACEAE								
....NITZSCHIA	--	-	9	1	--	-	19	3
.XANTHOPHYCEAE								
..HETEROCOCCALES								
...CHLOROTHECIACEAE								
....OPHIOCYTIUM	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROCCOCCALES								
...CHROCCOCCAEAE								
....ANACYSTIS	19000#	84	910#	96	--	-	400#	55
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	2600	12	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....TRACHELOMONAS	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
      * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

14321000 UMPQUA RIVER NEAR ELKTON, OR—Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO AUGUST 1978

DATE	JUN 13,78	JUL 25,78	AUG 16,78
TIME	1530	1730	1630
TOTAL CELLS/ML	24000	36000	6200
DIVERSITY: DIVISION	1.5	0.9	0.9
.CLASS	1.5	0.9	0.9
..ORDER	1.6	1.0	1.0
...FAMILY	2.1	1.0	1.1
....GENUS	2.6	1.2	1.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...COELASTRACEAE						
....COELASTRUM	650	3	--	-	--	-
...MICRACTINIACEAE						
....GOLENKINIA	*	0	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	1900	8	230	1	190	3
....CHLORELLA	--	-	--	-	4400#	70
....DICTYOSPHAERIUM	5800#	24	920	3	--	-
....KIRCHNERIELLA	160	1	--	-	--	-
....OOCYSTIS	330	1	2300	6	370	6
....SELENASTRUM	250	1	--	-	--	-
....TREUBARIA	--	-	230	1	--	-
...SCENEDESMACEAE						
....CRUCIGENIA	--	-	--	-	--	-
....SCENEDESMUS	1500	6	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	*	0	230	1	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	410	2	29000#	79	280	4
....SKELETONEMA	--	-	--	-	--	-
..PENNALES						
...ACHNANTHACEAE						
....COCCONEIS	160	1	230	1	--	-
....RHOICOSPHENIA	--	-	230	1	93	1
...CYMBELLACEAE						
....CYMBELLA	--	-	--	-	--	-
....EPITHEMIA	--	-	--	-	--	-
...DIATOMACEAE						
....DIATOMA	--	-	--	-	--	-
...FRAGILARIACEAE						
....FRAGILARIA	--	-	--	-	93	1
....SYNEDRA	--	-	--	-	47	1
...GOMPHONEMATACEAE						
....GOMPHONEIS	--	-	--	-	--	-
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	--	-	--	-	47	1
...NITZSCHIACEAE						
....NITZSCHIA	2900	12	--	-	47	1
.XANTHOPHYCEAE						
..HETEROCOCCALES						
...CHLOROTHECIACEAE						
....OPHIOCYTIUM	*	0	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROCCOCCALES						
...CHROCCOCCAEAE						
....ANACYSTIS	9400#	39	3200	9	--	-
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	--	-	700	11
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....TRACHELOMONAS	160	1	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

14321000 UMPQUA RIVER NEAR ELKTON, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LENGTH OF EXPO-SURE (DAYS)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)
APR					
19...	28	.866	1.34	.210	.000

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.0	13.5	11.0	10.5	9.5	9.0	6.5	6.0	7.5	7.5	8.0	7.5
2	15.0	14.5	11.0	10.5	9.0	9.0	6.0	5.0	7.5	7.0	7.5	6.5
3	14.5	14.0	10.5	10.0	9.5	9.0	5.5	5.0	8.0	7.5	7.0	6.5
4	15.0	13.5	10.0	9.0	9.5	9.0	6.5	5.5	8.0	8.0	7.5	7.0
5	14.5	14.0	9.0	8.5	9.0	9.0	7.0	6.5	8.0	8.0	8.5	7.5
6	14.5	13.5	9.0	9.0	9.0	8.5	8.0	7.0	8.5	8.0	9.0	8.0
7	14.0	13.5	9.0	8.5	8.5	8.0	7.5	7.5	8.5	8.0	9.5	9.0
8	14.0	13.5	9.0	8.5	8.0	7.0	7.5	7.0	8.0	7.0	10.0	*9.5
9	14.0	13.0	8.5	8.0	7.0	6.5	8.0	7.5	7.0	7.0	10.0	9.5
10	14.0	13.0	9.0	8.0	6.5	6.0	8.5	8.0	7.0	6.5	9.5	9.0
11	14.0	13.0	8.0	7.5	7.0	6.5	8.0	8.0	6.5	5.5	9.0	9.0
12	14.0	13.5	8.0	7.5	7.5	7.0	8.0	7.5	5.5	5.0	9.5	8.5
13	14.5	13.5	8.5	8.0	8.5	7.5	7.5	7.0	6.0	5.0	9.5	9.0
14	15.0	14.0	8.5	8.0	9.5	8.5	7.5	7.0	6.5	5.5	10.0	8.5
15	15.5	14.5	9.0	8.5	9.5	8.5	8.0	7.5	6.5	6.0	9.5	8.5
16	15.5	14.5	9.0	8.5	8.5	7.0	8.0	7.5	6.5	6.0	10.0	9.0
17	15.0	14.0	8.5	8.0	7.0	7.0	8.5	8.0	6.5	6.0	10.5	9.5
18	15.0	14.0	8.0	7.0	7.0	6.5	8.0	8.0	7.0	6.5	11.5	10.0
19	14.5	13.5	7.0	6.0	6.5	6.0	8.0	7.5	8.0	7.0	12.5	10.5
20	14.0	13.5	6.0	5.0	6.0	5.0	8.0	7.5	8.5	8.0	13.0	11.5
21	13.5	13.0	5.0	4.0	5.0	5.0	8.5	8.0	9.0	8.5	13.5	12.5
22	13.5	12.5	4.0	3.5	6.0	5.0	8.5	8.0	9.0	8.5	13.0	12.5
23	13.5	12.5	6.0	3.5	6.5	6.0	7.5	7.0	9.0	8.5	12.5	12.0
24	14.0	13.5	7.5	6.0	7.5	6.5	7.0	6.0	9.5	9.0	12.0	11.5
25	13.5	13.5	8.5	7.5	7.5	7.5	6.0	6.0	9.0	9.0	12.5	11.5
26	13.5	13.0	9.0	8.5	7.5	6.5	6.0	6.0	9.5	9.0	12.0	11.5
27	13.0	12.0	8.5	8.5	6.5	6.0	7.0	6.0	9.0	8.5	12.5	11.0
28	12.0	11.5	8.5	8.5	6.5	6.0	7.5	7.0	8.5	8.0	12.0	12.0
29	11.5	11.0	8.5	8.5	7.0	6.5	7.5	7.0	---	---	12.5	12.0
30	11.5	11.0	9.0	8.5	7.5	7.0	7.5	7.0	---	---	12.5	12.0
31	11.5	11.0	---	---	7.0	6.5	7.5	7.5	---	---	13.0	12.0
MONTH	15.5	11.0	11.0	3.5	9.5	5.0	8.5	5.0	9.5	5.0	13.5	6.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.5	12.0	13.5	12.0	20.5	18.0	20.5	19.5	25.5	24.0	22.0	20.5
2	12.0	11.5	13.5	12.5	21.5	19.5	20.0	19.5	26.0	24.5	23.0	21.5
3	11.5	11.0	14.0	12.5	22.5	20.5	20.0	19.5	26.0	25.0	23.0	21.5
4	11.5	10.5	14.0	12.5	23.5	21.0	19.5	18.5	26.0	25.0	21.5	20.5
5	11.0	10.0	14.0	12.5	25.0	22.5	21.0	18.5	25.5	24.5	20.5	19.5
6	10.5	10.0	15.0	12.5	25.0	23.5	22.0	19.5	26.0	24.5	19.5	19.0
7	10.0	9.5	15.5	13.5	24.5	23.0	22.5	21.0	27.0	25.0	19.0	18.5
8	10.0	9.5	16.5	14.0	24.5	23.0	22.5	21.0	27.5	26.5	19.0	18.0
9	11.0	10.0	16.0	15.5	23.5	22.0	22.0	21.0	28.0	26.5	18.5	17.5
10	12.5	11.0	15.5	14.5	22.0	21.0	21.5	20.0	27.5	26.5	18.0	17.0
11	13.5	12.0	16.0	14.5	22.0	20.0	22.5	20.0	26.5	25.5	18.5	17.5
12	13.5	12.0	15.0	14.5	21.5	20.0	23.5	21.0	25.5	24.0	18.0	16.5
13	13.0	12.5	15.0	14.5	20.0	19.5	24.0	22.0	24.5	23.5	17.5	17.0
14	12.5	11.5	14.5	14.0	20.0	18.5	25.0	22.5	24.0	22.5	18.0	17.0
15	11.5	10.5	14.5	13.5	20.5	18.5	25.0	23.0	24.0	22.5	18.0	17.5
16	11.0	10.0	14.5	13.5	21.0	19.5	23.5	22.5	23.0	22.0	18.0	17.0
17	10.5	10.0	15.0	13.5	21.5	19.5	24.0	22.5	22.0	21.0	17.5	17.0
18	11.5	10.0	16.0	14.0	21.5	20.5	24.5	22.5	22.5	21.0	17.0	16.0
19	11.5	11.0	17.5	15.5	22.0	19.5	25.0	23.0	22.5	21.5	17.5	16.0
20	11.5	10.5	19.0	16.5	21.5	20.5	25.5	23.5	22.0	21.5	17.5	16.5
21	11.5	11.0	18.5	17.5	21.5	20.5	26.5	24.0	21.5	21.0	17.5	17.0
22	11.0	10.5	17.5	16.5	21.5	20.5	27.0	25.0	21.0	20.5	17.0	16.0
23	11.0	10.5	16.5	16.0	20.5	20.0	27.0	25.5	20.5	20.0	18.0	16.5
24	10.5	10.5	15.5	15.0	20.0	19.0	27.0	25.5	20.5	19.5	18.5	17.0
25	11.0	10.5	15.0	14.5	20.0	19.0	27.5	26.0	20.0	18.5	19.0	17.5
26	11.5	11.0	14.5	14.0	20.5	19.0	27.0	26.0	20.5	18.5	19.5	18.0
27	12.0	11.0	14.5	13.5	22.5	20.0	26.0	25.0	21.0	19.5	19.5	19.0
28	11.5	11.0	15.5	14.0	22.5	21.5	25.5	24.5	22.0	20.0	19.0	18.0
29	12.5	11.0	17.0	14.5	22.5	21.5	25.5	24.0	22.5	20.5	19.0	18.0
30	12.5	12.0	18.0	15.5	21.5	20.5	26.0	24.5	22.5	21.5	19.0	18.5
31	---	---	19.0	16.5	---	---	26.0	24.0	21.5	21.0	---	---
MONTH	13.5	9.5	19.0	12.0	25.0	18.0	27.5	18.5	28.0	18.5	23.0	16.0

14323280 EEL LAKE NEAR LAKESIDE, OR

LOCATION.--Lat 43°36'17", long 124°10'28", in SE¼NW¼ sec.6, T.23 S., R.12 W., Coos County, Hydrologic Unit 17100304, on west shore 0.1 mi (0.2 km) south of Clear Creek and 1.9 mi (3.1 km) north of Lakeside.

DRAINAGE AREA.--8.70 mi² (22.5 km²).

PERIOD OF RECORD.--October 1971 to September 1978 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 56.00 ft (17.069 m) National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations NGVD.

REMARKS.--Lake not regulated. Lake outlet is a sand channel which is subject to shifting at high stages. Some water is pumped from lake for filtration and distribution purposes by Lakeside Water District.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 64.25 ft (19.583 m) Dec. 22, 1973; minimum, 56.93 ft (17.352 m) Aug. 22, 23, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum recorded elevation, 62.10 ft (18.928 m) Dec. 17; minimum, 57.42 ft (17.502 m) Aug. 11.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57.53	58.33	60.58	60.70	60.22	59.68	58.68	59.78	59.00	58.12	57.56	57.64
2	57.53	58.40	60.74	60.60	60.35	59.60	58.72	59.67	58.93	58.10	57.55	57.66
3	57.53	58.42	61.02	60.68	60.44	59.55	58.72	59.58	58.88	58.07	57.53	57.69
4	57.53	58.46	60.92	60.70	60.43	59.50	58.76	59.49	58.83	58.05	57.52	57.76
5	57.53	58.53	60.78	61.00	60.44	59.44	58.87	59.40	58.77	58.02	57.50	57.78
6	57.54	58.56	60.70	61.17	60.44	59.38	58.88	59.32	58.72	58.00	57.48	57.78
7	57.58	58.59	60.55	61.15	60.55	59.38	58.88	59.24	58.67	57.97	57.47	57.77
8	57.59	58.58	60.41	61.36	60.64	59.34	58.88	59.17	58.62	57.94	57.46	57.94
9	57.59	58.57	60.27	61.50	60.72	59.29	58.87	59.12	58.62	57.91	57.45	58.02
10	57.59	58.56	60.15	61.41	60.70	59.22	58.85	59.06	58.67	57.89	57.44	58.07
11	57.59	58.58	60.22	61.28	60.63	59.22	58.81	59.04	58.63	57.87	57.42	58.09
12	57.59	58.63	60.24	61.10	60.56	59.21	58.77	59.00	58.62	57.85	57.45	58.09
13	57.59	58.68	60.47	61.03	60.46	59.19	58.77	59.16	58.62	57.83	57.47	58.10
14	57.59	58.71	60.85	60.90	60.40	59.14	58.84	59.60	58.62	57.81	57.46	58.11
15	57.59	58.83	61.32	60.81	60.34	59.10	58.87	59.81	58.60	57.85	57.49	58.10
16	57.59	58.86	61.98	60.86	60.25	59.07	58.92	59.87	58.56	57.86	57.49	58.10
17	57.59	58.85	62.10	60.92	60.19	59.03	59.10	59.90	58.52	57.85	57.48	58.15
18	57.58	58.88	61.96	60.90	60.12	58.99	59.49	59.88	58.49	57.82	57.46	58.18
19	57.58	58.86	61.71	60.91	60.04	58.95	59.72	59.82	58.45	57.80	57.46	58.18
20	57.58	58.84	61.45	60.87	59.98	58.92	59.97	59.73	58.42	57.78	57.49	58.19
21	57.58	58.89	61.19	60.95	59.90	58.88	60.12	59.62	58.37	57.75	57.49	58.18
22	57.57	58.89	60.96	60.95	59.83	58.85	60.36	59.55	58.35	57.75	57.51	58.17
23	57.65	59.23	61.14	60.88	59.76	58.86	60.44	59.48	58.32	57.75	57.52	58.15
24	57.73	59.97	61.85	60.78	59.76	58.83	60.45	59.42	58.30	57.70	57.64	58.15
25	57.77	61.05	61.76	60.69	59.75	58.82	60.40	59.36	58.28	57.68	57.68	58.13
26	57.83	61.20	61.55	60.59	59.82	58.78	60.30	59.32	58.25	57.66	57.68	58.12
27	57.85	61.09	61.32	60.48	59.80	58.75	60.18	59.30	58.21	57.65	57.68	58.10
28	57.94	60.89	61.11	60.44	59.74	58.72	60.08	59.26	58.17	57.63	57.67	58.09
29	58.08	60.85	61.00	60.29	---	58.68	59.96	59.18	58.15	57.62	57.66	58.07
30	58.18	60.71	61.02	60.19	---	58.66	59.89	59.12	58.13	57.61	57.66	58.06
31	58.24	---	60.86	60.15	---	58.62	---	59.07	---	57.57	57.65	---
MEAN	57.67	59.18	61.04	60.85	60.22	59.09	59.39	59.43	58.53	57.83	57.53	58.02
MAX	58.24	61.20	62.10	61.50	60.72	59.68	60.45	59.90	59.00	58.12	57.68	58.19
MIN	57.53	58.33	60.15	60.15	59.70	58.62	58.68	59.00	58.13	57.57	57.42	57.64

CAL YR 1977 MEAN 58.28 MAX 62.10 MIN 56.93
WTR YR 1978 MEAN 59.06 MAX 62.10 MIN 57.42

14324500 WEST FORK MILLICOMA RIVER NEAR ALLEGANY, OR

LOCATION.--Lat 43°28'35", long 124°03'20", in SW¼NW¼ sec.19, T.24 S., R.11 W., Coos County, Hydrologic Unit 17100304, on left bank at highway bridge, 40 ft (12 m) upstream from Daggett Creek, 3.8 mi (6.1 km) north of Allegany, and at mile 5.82 (10.97 km).

DRAINAGE AREA.--46.9 mi² (121.5 km²), at cableway 300 ft (91 m) downstream.

PERIOD OF RECORD.--September 1954 to current year.

REVISED RECORDS.--WSP 1718: 1955-59. WRD Oreg. 1973: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 76.95 ft (23.454 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No regulation. Only minor diversions for irrigation above station.

AVERAGE DISCHARGE.--24 years, 256 ft³/s (7.250 m³/s), 74.13 in/yr (1,883 mm/yr), 185,500 acre-ft/yr (229 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,100 ft³/s (229 m³/s) Nov. 24, 1960, gage height, 15.86 ft (4.834 m); minimum, 1.8 ft³/s (0.051 m³/s) Sept. 5, 9, 1965, Sept. 8-10, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January or November 1953 reached a stage of about 17.9 ft (5.46 m), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	1930	*6,960	197	*13.49	4.112	Dec. 13	1330	5,540	157	11.95	3.642
Dec. 3	0130	4,710	133	11.00	3.353						

Minimum, 8.9 ft³/s (0.25 m³/s) Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	344	406	400	242	132	59	143	68	23	10	16
2	37	481	1390	380	698	120	155	125	59	24	10	18
3	31	285	2760	700	1370	112	172	110	54	23	9.7	20
4	27	207	1000	1400	644	110	157	101	51	23	9.7	34
5	25	418	561	1300	414	101	303	93	46	21	9.7	64
6	25	485	811	700	330	91	272	83	41	20	9.3	52
7	28	330	1020	600	430	120	192	76	39	19	9.3	44
8	28	233	634	650	620	323	155	70	36	18	9.3	49
9	24	181	422	550	611	227	125	66	40	17	9.3	176
10	22	146	320	450	521	179	106	64	66	17	9.3	358
11	20	130	548	360	372	165	91	74	62	16	8.9	195
12	18	146	1000	320	285	155	82	74	46	16	12	117
13	17	258	3670	380	225	155	76	70	46	15	17	85
14	17	320	2780	500	202	151	140	387	46	14	19	83
15	16	817	2940	1000	249	135	179	765	52	17	17	68
16	15	615	2210	950	230	120	214	481	46	31	17	56
17	14	333	1590	800	214	108	344	292	39	31	18	52
18	14	245	870	700	212	99	561	204	36	23	16	91
19	14	197	565	650	197	91	489	163	35	19	14	89
20	13	165	398	650	179	83	530	135	33	17	16	72
21	13	185	303	600	161	78	565	112	31	16	21	61
22	13	1320	236	550	146	72	1040	99	30	14	24	51
23	31	1510	376	460	130	89	849	91	29	13	23	46
24	70	3340	1790	383	122	106	455	99	29	13	34	37
25	185	3710	859	292	130	91	306	108	28	12	54	34
26	179	2290	481	233	176	62	233	97	27	12	32	31
27	132	887	360	195	170	74	192	103	26	12	23	29
28	95	512	550	172	151	70	172	106	23	12	20	27
29	135	544	700	155	---	66	153	97	23	12	17	25
30	383	489	600	138	---	62	151	85	23	11	16	23
31	426	---	550	157	---	57	---	76	---	11	16	---
TOTAL	2112	21123	32700	16775	9431	3624	8510	4649	1210	542	530.5	2103
MEAN	68.1	704	1055	541	337	117	284	150	40.3	17.5	17.1	70.1
MAX	426	3710	3670	1400	1370	323	1040	765	68	31	54	358
MIN	13	130	236	138	122	57	59	64	23	11	8.9	16
CFSM	1.45	15.0	22.5	11.5	7.19	2.50	6.06	3.20	.86	.37	.37	1.50
IN.	1.68	16.75	25.94	13.31	7.48	2.87	6.76	3.69	.96	.43	.42	1.67
AC-FT	4190	41900	64860	33270	18710	7190	16900	9220	2400	1080	1050	4170

CAL YR 1977 TOTAL 84085.7 MEAN 230 MAX 3710 MIN 5.6 CFSM 4.90 IN 66.69 AC-FT 166800
WTR YR 1978 TOTAL 103317.5 MEAN 283 MAX 3710 MIN 8.9 CFSM 6.03 IN 81.95 AC-FT 204900

14324580 PONY CREEK AT COOS BAY, OR

LOCATION.—Lat 43°22'50", long 124°14'24", in SE¼SE¼ sec.21, T.25 S., R.13 W., Coos County, Hydrologic Unit 17100304, at Ocean Boulevard in town of Coos Bay, 250 ft (76 m) below Lower Pony Creek Dam, and at mile 2.2 (3.5 km).

DRAINAGE AREA.—3.90 mi^2 (10.1 km^2).

PERIOD OF RECORD.—July 1975 to current year.

GAGE.—Water-stage recorder. Datum of gage is 12.23 ft (3.728 m) National Geodetic Vertical Datum of 1929 (Coos Bay-North Bend Water Board bench mark).

REMARKS.—Records good. Flow regulated by Upper and Lower Pony Creek Reservoirs (see stations 14324550 and 14324560) and diversion above station from Lower Pony Creek Reservoir to municipal water supply of Coos Bay-North Bend (station 14324570). Approximately 4.6 ft^3/s (0.13 m^3/s) is diverted to the Coos Bay-North Bend water treatment plant, maximum capacity, 10.8 ft^3/s (0.31 m^3/s).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 89 ft^3/s (2.52 m^3/s) Feb. 7, 1978, gage height, 4.79 ft (1.460 m); minimum, 0.01 ft^3/s (0.001 m^3/s) Feb. 11-20, Apr. 27, 29, May 12, 13, June 5, 1977.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 89 ft^3/s (2.52 m^3/s) Feb. 7, gage height, 4.79 ft (1.460 m); minimum, 0.02 ft^3/s (0.001 m^3/s) many days in October and November.

MONTHLY DISCHARGE OF PONY CREEK, PONY CREEK DIVERSION AND MONTHLY CHANGE IN CONTENTS OF RESERVOIRS NEAR COOS BAY, OR WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Runoff in acre-feet

	14324580 Pony Creek at Coos Bay	14324570 Diversion from Lower Pony Cr. Reservoir to City of Coos Bay	14324560 Lower Pony Creek Reservoir Change in Contents	14324550 Upper Pony Creek Reservoir Change in Contents	Pony Creek flow adjusted for Regulation and Diversion	Runoff in Inches
October	1.5	148	+56	+50	296	1.42
November	51	126	+52	+620	849	4.08
December	1,430	132	+3	+10	1,580	7.60
CAL YR 1977	1,490	2,160	+23	+1,760	5,430	26.11
January	1,960	157	-30	+80	2,170	10.44
February	1,090	109	+30	+10	1,240	5.96
March	198	322	-55	+10	475	2.28
April	600	326	+40	+170	1,140	5.48
May	254	375	-4	-10	615	2.96
June	7.5	366	-8	-60	306	1.47
July	4.8	425	+7	-130	307	1.48
August	3.7	381	-35	-210	140	.67
September	42	293	-113	-50	172	.83
WTR YR 1978	5,640	3,160	-57	+530	9,270	44.58

14324580 PONY CREEK AT COOS BAY, OR--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.04	1.1	11	4.9	4.2	.04	3.2	.05	.05	.06	.03
2	.02	.04	2.1	11	26	5.9	.05	.39	.05	.05	.06	.03
3	.02	.03	14	13	24	5.7	.04	.06	.05	.05	.06	.03
4	.02	.05	8.1	13	22	5.3	.05	1.1	.05	.11	.06	.04
5	.02	.05	4.5	42	22	6.3	.06	3.1	.05	.90	.05	.03
6	.02	.03	17	68	24	5.5	.04	2.8	.04	.05	.08	.03
7	.02	.04	17	69	63	4.7	.05	3.8	.04	.05	.35	.02
8	.02	.03	12	80	66	6.1	.04	2.1	.04	.05	.05	.03
9	.02	.03	11	79	64	4.4	.04	2.2	.05	.05	.05	.04
10	.02	.03	9.2	73	46	4.7	.05	3.1	.06	.05	.05	.03
11	.02	.04	11	70	23	4.7	.05	3.9	.05	.05	.05	.02
12	.02	.04	11	65	24	5.9	.30	2.8	1.1	.05	.06	.02
13	.02	.05	11	57	20	6.1	.21	4.2	1.0	.04	.05	.02
14	.02	.04	13	39	6.3	4.4	3.4	10	.18	.04	.05	.02
15	.02	.05	29	34	6.5	4.5	8.6	29	.30	.04	.05	.02
16	.02	.04	52	37	8.2	4.4	12	26	.06	.04	.05	.02
17	.02	.03	55	35	8.4	4.2	19	5.7	.05	.04	.05	.02
18	.03	.04	47	35	9.2	4.2	32	.06	.05	.04	.05	.02
19	.03	.03	41	20	8.1	4.4	37	.06	.05	.05	.05	.02
20	.03	.03	47	16	8.2	3.5	32	.05	.05	.05	.05	.02
21	.03	.06	59	29	7.7	.05	30	.05	.04	.05	.05	.02
22	.03	.07	47	30	7.7	.05	32	.07	.04	.05	.05	.02
23	.04	.08	43	22	7.0	.06	25	.63	.04	.05	.04	.02
24	.04	.33	39	17	7.7	.05	24	3.9	.04	.05	.07	.02
25	.03	6.5	30	13	9.2	.04	21	2.8	.04	.05	.04	15
26	.03	7.2	26	10	9.2	.04	9.4	3.6	.04	.05	.04	5.5
27	.02	4.1	26	1.1	7.9	.04	4.5	2.8	.04	.05	.04	.02
28	.03	2.4	12	.06	7.0	.04	4.7	3.9	.04	.05	.05	.02
29	.03	2.6	5.7	.06	---	.04	3.4	3.8	.04	.05	.04	.02
30	.03	1.4	8.2	.07	---	.04	3.4	2.8	.04	.05	.03	.02
31	.03	---	10	.19	---	.03	---	.05	---	.06	.03	---
TOTAL	.77	25.50	718.9	989.48	547.2	99.58	302.42	128.02	3.77	2.41	1.86	21.17
MEAN	.025	.85	23.2	31.9	19.5	3.21	10.1	4.13	.13	.078	.060	.71
MAX	.04	7.2	59	80	66	6.3	37	29	1.1	.90	.35	15
MIN	.02	.03	1.1	.06	4.9	.03	.04	.05	.04	.04	.03	.02
AC-FT	1.5	51	1430	1960	1090	198	600	254	7.5	4.8	3.7	42

CAL YR 1977 TOTAL 752.63 MEAN 2.06 MAX 59 MIN .01 AC-FT 1490
WTR YR 1978 TOTAL 2841.08 MEAN 7.78 MAX 80 MIN .02 AC-FT 5640

14325000 SOUTH FORK COQUILLE RIVER AT POWERS, OR

LOCATION.--Lat 42°53'30", long 124°04'10", in SE¼ sec.12, T.31 S., R.12 W., Coos County, Hydrologic Unit 17100305, on left bank 0.6 mi (1.0 km) downstream from highway bridge at Powers, 0.9 mi (1.4 km) upstream from Woodward Creek, and at mile 64.5 (103.8 km).

DRAINAGE AREA.--169 mi^2 (438 km^2).

PERIOD OF RECORD.--September 1916 to September 1926, October 1928 to current year.

REVISED RECORDS.--WSP 1184: 1946(M). WSP 1448: 1917-18(M), 1919, 1920(M), 1925.

GAGE.--Water-stage recorder. Datum of gage is 197.42 ft (60.174 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1938, nonrecording gages at various sites within 1 mi (2 km) of present site at different datums.

REMARKS.--Records good. No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--59 years (water years 1917-26, 1930-78), 788 ft^3/s (22.32 m^3/s), 63.32 in/yr (1,608 mm/yr), 570,900 acre-ft/yr (704 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,900 ft^3/s (1,380 m^3/s) Dec. 22, 1964, gage height, 26.51 ft (8.080 m), from floodmarks, from rating curve extended above 19,000 ft^3/s (538 m^3/s) on basis of contracted-opening measurement at gage height 18.14 ft (5.529 m) and slope-area measurement of peak flow; minimum, 12 ft^3/s (0.34 m^3/s) Sept. 22-25, 27-30, 1939, Oct. 5, 1961, Oct. 16-20, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,300 ft^3/s (263 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 24	1600	12,100	343	11.29	3.441	Jan. 5	1630	9,530	270	9.93	3.027
Dec. 13	1800	*13,300	377	*11.91	3.630						

Minimum, 26 ft^3/s (0.74 m^3/s) Aug. 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	260	373	780	1380	846	376	330	723	248	76	33	42
2	194	569	695	1170	3020	357	484	636	227	80	32	38
3	157	458	1130	2320	5920	365	530	562	209	82	32	37
4	133	599	1010	2820	2720	413	729	499	188	80	31	82
5	117	1640	940	5850	1930	438	1430	447	175	75	31	264
6	115	1450	890	4730	1730	425	1340	401	163	68	30	198
7	113	965	1190	2630	3010	551	1000	365	151	65	29	195
8	101	691	1080	2450	3600	1150	816	338	145	65	28	291
9	91	526	896	2580	3270	909	684	316	142	62	27	1950
10	84	414	746	2060	2250	723	594	301	151	63	27	2610
11	78	365	1890	1620	1610	657	509	316	145	60	26	1180
12	73	373	2500	1350	1260	668	447	294	132	59	28	673
13	67	552	8700	1170	1040	636	401	270	151	57	31	470
14	64	505	8960	1570	935	605	535	409	140	54	32	396
15	61	481	9000	1680	1130	551	928	1610	132	60	32	319
16	58	536	4710	3900	1040	494	1030	1390	119	69	37	267
17	56	458	3660	3620	1000	447	1290	941	112	63	38	244
18	55	410	2580	2790	1030	405	1520	717	107	56	37	319
19	54	365	1870	2850	988	372	2280	578	105	53	36	294
20	51	319	1440	2690	871	342	2500	479	101	50	36	248
21	51	878	1170	2380	751	319	2170	417	101	48	45	212
22	49	6310	1000	2380	657	301	2850	372	96	45	66	185
23	66	4890	4010	1870	583	615	2730	345	96	42	54	166
24	103	7840	5030	1430	525	994	1910	405	96	41	287	151
25	220	6530	2600	1110	494	723	1440	443	92	40	361	140
26	280	5490	1770	954	484	583	1210	384	88	38	137	127
27	220	2620	1460	810	443	499	981	357	82	37	88	119
28	171	1670	1240	712	405	438	846	338	78	37	68	112
29	208	1220	1370	631	---	401	740	312	75	37	57	105
30	912	948	2200	567	---	369	723	287	76	36	51	101
31	542	---	1790	535	---	338	---	267	---	35	48	---
TOTAL	4804	50445	78207	64609	43542	16464	34977	15519	3923	1733	1895	11535
MEAN	155	1682	2523	2084	1555	531	1166	501	131	55.9	61.1	385
MAX	912	7840	9000	5850	5920	1150	2850	1610	248	82	361	2610
MIN	49	319	695	535	405	301	330	267	75	35	26	37
CFSM	.92	9.95	14.9	12.3	9.20	3.14	6.90	2.96	.78	.33	.36	2.28
IN.	1.06	11.10	17.21	14.22	9.58	3.62	7.70	3.42	.86	.38	.42	2.54
AC-FT	9530	100100	155100	128200	86370	32660	69380	30780	7780	3440	3760	22880

CAL YR 1977 TOTAL 215977 MEAN 592 MAX 9000 MIN 21 CFSM 3.50 IN 47.54 AC-FT 428400
WTR YR 1978 TOTAL 327653 MEAN 898 MAX 9000 MIN 26 CFSM 5.31 IN 72.12 AC-FT 649900

14326800 NORTH FORK COQUILLE RIVER NEAR FAIRVIEW, OR

LOCATION.--Lat 43°10'45", long 124°05'10", in NE¼NE¼ sec.2, T.28 S., R.12 W., Coos County, Hydrologic Unit 17100305, on right bank 0.7 mi (1.1 km) downstream from Lost Creek, 2.6 mi (4.2 km) south of Fairview, and at mile 21.7 (34.9 km).

DRAINAGE AREA.--74.0 mi² (191.7 km²).

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--WRD Oreg. 1972: 1964-67, 1969-71(M,P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 63.34 ft (19.306 m) National Geodetic Vertical Datum of 1929 (from stadia survey). Supplementary water-stage recorder and crest-stage gage 0.5 mi (0.8 km) upstream (used during periods of backwater at base gage).

REMARKS.--Records fair. No regulation. Several diversions for irrigation by pumping above station.

AVERAGE DISCHARGE.--15 years, 295 ft³/s (8.354 m³/s), 54.14 in/yr (1,375 mm/yr), 213,700 acre-ft/yr (263 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,760 ft³/s (220 m³/s) Mar. 2, 1972; maximum gage height at supplementary gage, 18.80 ft (5.730 m) Jan. 8, 1976, backwater from ponding in valley below; maximum gage height at supplementary gage unaffected by backwater, 18.03 ft (5.496 m), Jan. 8, 1976; minimum discharge, 2.0 ft³/s (0.057 m³/s) Sept. 9, 10, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*), at supplementary gage:

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 24	2130	*7,180	203	*13.73	4.185	Dec. 15	2400	3,600	102	10.21	3.112
Dec. 3	0530	3,440	97.4	10.04	3.060	Feb. 3	0700	4,280	121	10.81	3.295

Minimum, 7.8 ft³/s (0.22 m³/s) Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	238	409	550	260	203	106	190	93	45	12	11
2	48	337	870	480	704	196	184	167	81	50	11	10
3	40	269	2620	600	3190	188	239	148	78	50	10	11
4	33	194	1340	950	1500	186	218	135	75	45	10	32
5	30	279	810	1530	873	186	355	127	69	44	10	66
6	30	400	743	1790	722	178	342	117	64	38	10	60
7	34	299	881	1080	788	169	263	109	59	38	9.3	36
8	38	229	648	908	866	216	218	102	57	34	9.0	30
9	34	190	510	897	981	209	192	96	58	30	8.7	74
10	30	163	445	740	840	190	172	95	88	30	8.1	249
11	28	146	429	600	667	172	155	106	101	29	7.8	155
12	25	165	584	500	550	169	142	99	78	29	8.7	84
13	23	273	1980	550	471	165	137	96	81	21	13	59
14	22	279	2520	700	404	153	198	137	88	23	16	57
15	22	504	3090	800	426	144	244	584	101	25	13	49
16	20	515	2070	1600	393	135	296	515	85	46	13	38
17	19	339	1580	1300	368	130	320	314	75	41	11	36
18	22	202	1100	1200	404	125	339	229	71	32	9.4	68
19	18	252	816	1200	379	120	430	188	68	26	8.6	58
20	18	216	717	1000	342	114	572	159	62	23	8.5	47
21	18	348	710	1000	305	109	730	140	60	20	13	42
22	17	1340	706	750	276	106	1100	130	60	19	20	40
23	42	974	981	600	255	148	997	122	59	17	16	35
24	73	3740	1210	500	239	201	646	139	60	16	26	31
25	142	3830	768	460	225	157	491	140	60	14	51	24
26	399	2760	706	407	222	139	382	127	58	14	27	28
27	224	1260	700	336	220	128	305	140	55	14	18	28
28	212	709	600	293	216	125	257	139	48	14	14	27
29	212	581	750	255	---	117	222	125	45	13	12	26
30	391	486	850	227	---	114	211	111	45	12	11	26
31	306	---	700	222	---	109	---	99	---	12	11	---
TOTAL	2628	21517	32743	24045	17086	4801	10463	5125	2082	864	426.1	1537
MEAN	84.8	717	1056	776	610	155	349	165	69.4	27.9	13.7	51.2
MAX	399	3830	3090	1790	3190	216	1100	584	101	50	51	249
MIN	17	146	409	222	216	106	106	95	45	12	7.8	10
CFSM	1.15	9.69	14.3	10.5	8.24	2.10	4.72	2.23	.94	.38	.19	.69
IN.	1.32	10.82	16.46	12.09	8.59	2.41	5.26	2.58	1.05	.43	.21	.77
AC-FT	5210	42680	64950	47690	33690	9520	20750	10170	4130	1710	845	3050

CAL YR 1977 TOTAL 87503.2 MEAN 240 MAX 3830 MIN 4.4 CFSM 3.24 IN 43.99 AC-FT 173600
WTR YR 1978 TOTAL 123317.1 MEAN 338 MAX 3830 MIN 7.8 CFSM 4.57 IN 61.99 AC-FT 244600

14328000 ROGUE RIVER ABOVE PROSPECT, OR

LOCATION.--Lat 42°46'30", long 122°29'55", in SE¼NE¼ sec.19, T.32 S., R.3 E., Jackson County, Hydrologic Unit 17100307, Rogue River National Forest, on left bank 1.4 mi (2.3 km) upstream from Pacific Power & Light Co. diversion dam, 1.8 mi (2.9 km) northwest of Prospect, and at mile 173.4 (279.0 km).

DRAINAGE AREA.--312 mi^2 (808 km^2).

PERIOD OF RECORD.--January 1908 to February 1912, October 1923 to current year. Monthly discharge only for some periods, published in WSP 1318. Prior to October 1925, published as "near Prospect."

REVISED RECORDS.--WSP 1248: 1925, 1927(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,620 ft (799 m), from river-profile map. Prior to Feb. 17, 1912, nonrecording gage at several sites within a few hundred feet upstream at various datums.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--58 years (water years 1909-11, 1924-78), 823 ft^3/s (23.31 m^3/s), 35.82 in/yr (910 mm/yr), 596,300 acre-ft/yr (735 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft^3/s (634 m^3/s) Dec. 22, 1964, gage height, 11.55 ft (3.520 m), from floodmark, from rating curve extended above 9,000 ft^3/s (255 m^3/s) on basis of slope-area measurement at 16,600 ft^3/s (470 m^3/s); minimum observed, 200 ft^3/s (5.66 m^3/s) Nov. 20, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft^3/s (76.5 m^3/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
Nov. 26	0230	6,960	197	6.38	1.945	Dec. 15	0030	*7,990	226	*6.86	2.091
Dec. 3	0800	4,060	115	4.85	1.478						

Minimum, 295 ft^3/s (8.35 m^3/s) Nov. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	379	450	1490	976	759	751	1080	886	709	534	397	379
2	357	539	1550	950	810	730	994	878	716	556	393	379
3	344	481	3370	985	1690	723	910	871	716	567	393	375
4	336	435	2500	942	1460	737	886	848	730	528	388	388
5	332	486	1890	976	1300	773	863	802	744	507	388	407
6	336	507	1640	976	1300	817	825	773	744	495	388	440
7	349	475	1640	918	1440	802	795	773	730	502	384	435
8	336	445	1340	910	1410	1030	766	788	709	491	384	425
9	327	421	1160	1070	1230	1060	766	832	702	475	379	475
10	323	407	1040	1140	1070	976	817	848	709	470	379	628
11	323	397	1270	1050	976	910	863	871	682	465	379	590
12	319	402	1440	1050	902	855	825	817	642	460	379	475
13	319	411	3040	1070	848	825	802	802	622	455	393	450
14	319	411	5820	1150	810	773	773	825	603	450	388	455
15	315	609	6500	1180	788	744	751	950	590	445	388	425
16	315	682	3550	1320	737	723	751	886	573	450	407	411
17	311	545	2570	1510	723	730	709	832	562	445	402	407
18	311	502	1970	1410	730	751	695	825	596	440	388	425
19	311	465	1600	1320	759	788	695	840	584	435	384	425
20	311	388	1380	1300	795	832	702	863	567	430	384	411
21	311	416	1240	1250	848	866	709	871	562	421	393	407
22	311	702	1140	1220	878	1040	716	871	550	421	416	402
23	315	628	1130	1080	902	1060	759	802	539	416	407	397
24	327	2630	1220	994	902	1030	780	788	550	407	397	393
25	534	3980	1130	942	894	959	855	780	556	407	491	388
26	518	5240	1040	918	863	950	967	737	534	407	416	388
27	388	2730	1080	863	825	985	1000	737	518	407	397	384
28	362	1990	1130	825	780	994	959	737	518	407	388	384
29	370	1860	1180	802	---	994	918	744	528	402	384	379
30	523	1790	1240	773	---	1010	926	723	539	402	384	379
31	475	---	1080	759	---	1010	---	709	---	397	384	---
TOTAL	11007	31424	59370	32629	27429	27248	24857	25309	18624	14095	12222	12706
MEAN	355	1047	1915	1053	980	879	829	816	621	455	394	424
MAX	534	5240	6500	1510	1690	1060	1080	950	744	567	491	628
MIN	311	388	1040	759	723	723	695	709	518	397	379	375
CFSM	1.14	3.36	6.14	3.38	3.14	2.82	2.66	2.62	1.99	1.46	1.26	1.36
IN.	1.31	3.75	7.08	3.89	3.27	3.25	2.96	3.02	2.22	1.68	1.46	1.51
AC-FT	21830	62330	117800	64720	54410	54050	49300	50200	36940	27960	24240	25200

CAL YR 1977 TOTAL 230741 MEAN 632 MAX 6500 MIN 303 CFSM 2.03 IN 27.51 AC-FT 457700
WTR YR 1978 TOTAL 296920 MEAN 813 MAX 6500 MIN 311 CFSM 2.61 IN 35.40 AC-FT 588900

14330000 ROGUE RIVER BELOW PROSPECT, OR

LOCATION.--Lat 42°43'50", long 122°30'55", in SE¼NW¼ sec.6, T.33 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 600 ft (183 m) downstream from Prospect No. 1 powerplant, 1.4 mi (2.3 km) downstream from Mill Creek, 2.0 mi (3.2 km) southwest of Prospect, 2.1 mi (3.4 km) upstream from South Fork Rogue River, and at mile 169.4 (272.6 km).

DRAINAGE AREA.--379 mi^2 (982 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1913 to September 1930, October 1968 to current year.

REVISED RECORDS.--WSP 1518: 1914-23, 1924(M), 1925, 1928.

GAGE.--Water-stage recorder. Altitude of gage is 1,970 ft (600 m), from topographic map. Prior to September 1927 nonrecording gage at site 1,000 ft (305 m) upstream, above powerplants, at different datum, also concurrent nonrecording gage on headrace to obtain equivalent combined flow.

REMARKS.--Water-discharge records good. Small fluctuations caused by powerplant 600 ft (183 m) above station. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--27 years, 1,233 ft^3/s (34.92 m^3/s), 893,300 acre-ft/yr (1,100 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft^3/s (309 m^3/s) Jan. 18, 1971, gage height, 7.62 ft (2.323 m), from high-water mark; minimum, 235 ft^3/s (6.66 m^3/s) Sept. 12, 1977, caused by regulation of diversion gates upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 12.4 ft (3.78 m) Dec. 22, 1964, from floodmarks, discharge, 25,000 ft^3/s (708 m^3/s), from records for station above Prospect (see station 14328000) and for station below South Fork Rogue River near Prospect (see station 14335000) after adjusting for estimated intervening tributary inflow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,180 ft^3/s (260 m^3/s) Dec. 15, gage height, 6.91 ft (2.106 m); minimum, 280 ft^3/s (7.93 m^3/s) Aug. 7, caused by regulation of diversion gates upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	879	958	2130	1680	1460	1500	1790	1650	1380	1140	934	852
2	852	1070	2210	1650	1530	1490	1710	1630	1380	1140	929	868
3	820	1010	4350	1680	2440	1490	1630	1630	1380	1160	923	857
4	815	940	3460	1650	2160	1500	1610	1600	1390	1120	917	868
5	805	994	2510	1680	1990	1510	1590	1550	1410	1100	918	885
6	805	1020	2290	1660	1980	1580	1550	1530	1410	1100	918	952
7	825	982	2260	1610	2150	1550	1510	1510	1390	1100	868	952
8	815	946	1980	1580	2130	1780	1480	1520	1370	1080	879	940
9	795	918	1790	1740	1980	1840	1480	1570	1360	1070	868	988
10	785	901	1660	1820	1860	1770	1520	1580	1360	1050	868	1180
11	785	885	1880	1720	1760	1700	1580	1590	1350	1040	846	1160
12	770	896	2050	1710	1680	1640	1540	1550	1300	1040	868	994
13	775	907	3710	1720	1620	1600	1520	1520	1270	1040	885	958
14	770	923	6820	1800	1580	1550	1490	1540	1260	1020	879	976
15	765	1100	7530	1830	1560	1500	1480	1670	1240	1020	879	940
16	760	1300	4190	1940	1490	1480	1480	1620	1210	1020	907	912
17	765	1110	3250	2110	1480	1480	1440	1560	1200	1010	896	907
18	765	1040	2590	2010	1490	1490	1430	1540	1250	1000	874	940
19	765	1000	2200	1950	1490	1530	1420	1550	1260	994	846	923
20	765	857	2040	1940	1530	1580	1450	1580	1240	988	863	901
21	765	929	1890	1900	1580	1620	1440	1590	1230	976	852	896
22	765	1220	1830	1860	1610	1760	1440	1580	1220	976	923	896
23	765	1220	1840	1750	1630	1780	1490	1500	1180	976	885	885
24	780	3030	1910	1690	1640	1760	1510	1490	1160	970	874	879
25	1040	4530	1820	1630	1630	1680	1580	1500	1170	964	964	874
26	1020	6050	1740	1610	1600	1670	1700	1430	1140	970	896	857
27	868	3340	1750	1550	1570	1690	1750	1420	1140	964	857	825
28	835	2610	1810	1500	1520	1710	1720	1420	1120	952	852	852
29	846	2480	1840	1470	---	1710	1680	1420	1130	946	857	863
30	1060	2410	1920	1450	---	1730	1690	1400	1140	940	852	857
31	988	---	1770	1470	---	1730	---	1380	---	934	852	---
TOTAL	25613	47576	81020	53360	48140	50400	46700	47620	38040	31800	27429	27637
MEAN	826	1586	2614	1721	1719	1626	1557	1536	1268	1026	885	921
MAX	1060	6050	7530	2110	2440	1840	1790	1670	1410	1160	964	1180
MIN	760	857	1660	1450	1460	1480	1420	1380	1120	934	846	825
AC-FT	50800	94370	160700	105800	95490	99970	92630	94450	75450	63080	54410	54820

CAL YR 1977 TOTAL 433228 MEAN 1187 MAX 7530 MIN 722 AC-FT 859300
WTR YR 1978 TOTAL 525335 MEAN 1439 MAX 7530 MIN 760 AC-FT 1042000

14330000 ROGUE RIVER BELOW PROSPECT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1976 to current year.
pH: November 1976 to current year.
WATER TEMPERATURES: October 1968 to current year.
TURBIDITY: December 1976 to current year.
SUSPENDED SEDIMENT DISCHARGE: November 1976 to current year.

INSTRUMENTATION.--Water-quality monitor and automatic pumping sediment sampler since November 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 71 micromos Nov. 7, 1977; minimum recorded, 30 micromhos Dec. 14, 1977.
pH: Maximum, 8.0 units July 21, 22, July 24 to Aug. 6, 1978; minimum, 7.0 units Nov. 30, 1976.
WATER TEMPERATURES: Maximum, 17.0°C June 8, Aug. 11, 1978 (result of regulation); minimum, 0.0°C Jan. 1, 2, 4, 5, 1970, Mar. 1, 1971.
TURBIDITY: Maximum recorded, 330 JTU Mar. 9, 1977, but may have been higher during period of no record in December 1977; minimum, 0 JTU on many days.
SEDIMENT CONCENTRATIONS: Maximum, 809 mg/l Dec. 15, 1977; minimum, 0 mg/l on many days each year.
SEDIMENT DISCHARGE: Maximum, 17,790 tons (16,140 tonnes) Dec. 15, 1977; minimum, 0 tons (0 tonnes) on many days each year.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 71 micromhos Nov. 7; minimum recorded, 30 micromhos Dec. 14.
pH: Maximum, 8.0 units July 21, 22, July 24 to Aug. 6; minimum recorded, 7.1 units Dec. 14, 15, Jan. 3, 9, 10, 17.
WATER TEMPERATURES: Maximum, 17.0°C June 8, Aug. 11 (result of regulation); minimum recorded, 2.0°C Jan. 24.
TURBIDITY: Maximum recorded, 100 JTU Dec. 16, but was probably higher during period of no record in December; minimum, 0 JTU on many days.
SEDIMENT CONCENTRATIONS: Maximum, 809 mg/l Dec. 15; minimum, 0 mg/l on many days in February and September.
SEDIMENT DISCHARGE: Maximum, 17,790 tons (16,140 tonnes) Dec. 15; minimum, 0 tons (0 tonnes) on many days in February and September.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	65	45	---	41	37	34	49	49	51	56	62
2	63	65	45	---	41	38	32	49	49	48	56	61
3	64	64	45	---	37	40	34	50	51	44	56	61
4	64	66	49	49	37	39	35	48	50	47	55	61
5	64	66	---	48	38	39	34	47	50	48	56	60
6	64	66	---	47	37	39	35	48	50	54	57	60
7	64	71	44	47	38	38	36	49	49	53	58	61
8	---	64	45	48	36	38	38	50	57	54	58	61
9	---	64	47	48	37	36	39	48	50	56	58	61
10	---	64	48	49	36	36	41	46	48	55	59	59
11	---	64	48	49	36	37	40	44	50	55	64	58
12	---	62	45	50	39	36	39	42	52	55	57	59
13	64	63	44	50	38	37	40	45	52	56	56	62
14	64	63	33	47	41	37	40	44	52	58	57	62
15	65	62	---	46	40	38	39	42	53	57	57	62
16	65	---	---	46	39	39	40	43	54	56	56	62
17	65	---	---	43	41	39	40	45	55	57	57	63
18	65	---	---	41	42	40	43	47	55	57	59	62
19	65	---	---	40	42	40	42	46	55	58	64	62
20	65	---	---	41	42	39	42	46	57	57	63	63
21	65	---	---	42	42	39	43	45	58	57	57	65
22	64	---	---	41	41	37	44	44	57	57	57	64
23	64	---	---	41	41	36	45	43	56	57	57	64
24	64	---	---	44	40	35	45	43	52	58	60	65
25	64	---	---	43	40	36	46	45	50	58	57	64
26	61	---	---	43	41	37	46	45	51	58	58	65
27	63	---	---	42	41	37	46	48	53	57	60	65
28	64	---	---	43	38	36	46	49	53	57	62	64
29	65	---	---	42	---	35	49	48	48	56	63	63
30	63	44	---	41	---	36	48	47	50	56	62	63
31	63	---	---	43	---	34	---	49	---	57	62	---
MEAN	64	63	45	45	39	37	41	46	52	55	59	62

14330000 ROGUE RIVER BELOW PROSPECT, OR—Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.6	7.5	7.5	7.3	7.3	7.2	---	---	7.6	7.5	7.7	7.6
2	7.6	7.5	7.5	7.3	7.4	7.2	---	---	7.6	7.5	7.7	7.6
3	7.6	7.4	7.5	7.4	7.4	7.3	7.2	7.1	7.5	7.4	7.7	7.6
4	7.6	7.4	7.5	7.4	7.3	7.3	7.3	7.2	7.5	7.4	7.7	7.6
5	7.6	7.4	7.6	7.4	---	---	7.2	7.2	7.6	7.5	7.7	7.6
6	7.6	7.4	7.6	7.4	---	---	7.2	7.2	7.5	7.5	7.7	7.6
7	---	---	7.6	7.3	7.3	7.3	7.2	7.2	7.6	7.5	7.7	7.6
8	---	---	7.5	7.4	7.3	7.3	7.3	7.2	7.5	7.5	7.6	7.6
9	---	---	7.5	7.4	7.3	7.3	7.2	7.1	7.6	7.5	7.6	7.5
10	---	---	7.5	7.3	7.4	7.3	7.2	7.1	7.6	7.5	7.7	7.6
11	---	---	7.5	7.3	7.3	7.3	7.2	7.2	7.6	7.6	7.7	7.6
12	---	---	7.5	7.3	7.3	7.3	7.2	7.2	7.6	7.6	7.7	7.6
13	7.6	7.4	7.5	7.3	7.3	7.1	7.2	7.2	7.6	7.6	7.7	7.6
14	7.6	7.4	7.5	7.3	7.2	7.1	7.2	7.2	7.7	7.5	7.8	7.5
15	7.6	7.4	7.4	7.3	---	---	7.2	7.2	7.7	7.6	7.7	7.6
16	7.6	7.3	---	---	---	---	7.2	7.2	7.7	7.6	7.7	7.6
17	7.5	7.4	---	---	---	---	7.2	7.1	7.7	7.6	7.7	7.6
18	7.6	7.3	---	---	---	---	7.2	7.2	7.7	7.6	7.7	7.6
19	7.6	7.3	---	---	---	---	7.2	7.2	7.7	7.6	7.7	7.6
20	7.5	7.4	---	---	---	---	7.2	7.2	7.7	7.6	7.7	7.6
21	7.6	7.4	---	---	---	---	7.2	7.2	7.7	7.6	7.7	7.5
22	7.6	7.4	---	---	---	---	7.2	7.2	7.6	7.6	7.6	7.5
23	7.5	7.3	---	---	---	---	7.2	7.2	7.7	7.6	7.6	7.5
24	7.5	7.3	---	---	---	---	7.3	7.2	7.7	7.6	7.6	7.5
25	7.5	7.3	---	---	---	---	7.3	7.2	7.7	7.6	7.6	7.5
26	7.5	7.4	---	---	---	---	7.3	7.2	7.7	7.6	7.7	7.5
27	7.6	7.3	---	---	---	---	7.3	7.2	7.7	7.6	7.6	7.5
28	7.5	7.4	---	---	---	---	7.3	7.2	7.7	7.6	7.6	7.5
29	7.5	7.4	---	---	---	---	7.3	7.2	---	---	7.6	7.5
30	7.5	7.3	7.3	7.2	---	---	7.3	7.2	---	---	7.6	7.5
31	7.5	7.3	---	---	---	---	7.6	7.2	---	---	7.6	7.5
MONTH	7.6	7.3	7.6	7.2	7.4	7.1	7.6	7.1	7.7	7.4	7.8	7.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.6	7.5	7.6	7.5	7.7	7.6	7.9	7.6	8.0	7.6	7.9	7.6
2	7.6	7.5	7.7	7.5	7.7	7.6	7.8	7.6	8.0	7.6	7.9	7.6
3	7.6	7.5	7.7	7.5	7.7	7.5	7.8	7.6	8.0	7.6	7.9	7.6
4	7.6	7.5	7.7	7.6	7.7	7.5	7.9	7.6	8.0	7.6	7.9	7.7
5	7.6	7.5	7.7	7.6	7.7	7.5	7.9	7.7	8.0	7.6	7.8	7.7
6	7.6	7.5	7.7	7.6	7.7	7.5	7.8	7.6	8.0	7.6	7.9	7.7
7	7.6	7.5	7.8	7.5	7.7	7.5	7.8	7.6	7.8	7.6	7.9	7.7
8	7.7	7.5	7.7	7.6	7.7	7.5	7.9	7.6	7.9	7.6	7.9	7.7
9	7.7	7.5	7.7	7.6	7.7	7.6	7.9	7.6	7.8	7.6	7.8	7.7
10	7.7	7.5	7.7	7.6	7.7	7.6	7.9	7.6	7.8	7.6	7.8	7.6
11	7.7	7.6	7.6	7.6	7.7	7.6	7.9	7.6	7.9	7.6	7.8	7.6
12	7.7	7.5	7.7	7.5	7.7	7.5	7.9	7.6	7.8	7.6	7.8	7.6
13	7.7	7.5	7.7	7.5	7.8	7.6	7.9	7.6	7.8	7.7	7.8	7.6
14	7.7	7.5	7.7	7.5	7.8	7.6	7.9	7.6	7.8	7.6	7.9	7.6
15	7.7	7.6	7.6	7.5	7.8	7.6	7.9	7.6	7.8	7.6	7.9	7.6
16	7.7	7.6	7.6	7.5	7.8	7.6	7.9	7.6	7.8	7.6	7.9	7.7
17	7.7	7.6	7.6	7.5	7.8	7.6	7.9	7.6	7.8	7.7	7.9	7.7
18	7.7	7.5	7.6	7.5	7.8	7.6	7.9	7.6	7.8	7.7	7.9	7.7
19	7.7	7.5	7.6	7.5	7.8	7.6	7.9	7.6	7.9	7.7	7.9	7.7
20	7.7	7.6	7.6	7.5	7.8	7.6	7.9	7.6	7.9	7.7	7.9	7.7
21	7.7	7.6	7.6	7.5	7.8	7.6	8.0	7.6	7.9	7.6	7.9	7.7
22	7.7	7.6	7.6	7.5	7.8	7.6	8.0	7.6	7.9	7.7	7.9	7.7
23	7.7	7.6	7.6	7.5	7.9	7.6	7.9	7.6	7.9	7.6	7.9	7.7
24	7.7	7.6	7.6	7.6	7.8	7.6	8.0	7.6	7.9	7.6	7.9	7.7
25	7.6	7.5	7.7	7.5	7.8	7.6	8.0	7.6	7.9	7.7	7.9	7.7
26	7.6	7.5	7.7	7.5	7.8	7.6	8.0	7.6	7.9	7.6	7.9	7.7
27	7.6	7.5	7.7	7.5	7.8	7.6	8.0	7.6	7.9	7.6	7.9	7.7
28	7.6	7.5	7.7	7.5	7.8	7.6	8.0	7.6	7.9	7.6	7.8	7.6
29	7.7	7.5	7.7	7.6	7.8	7.6	8.0	7.6	7.9	7.6	7.9	7.6
30	7.7	7.5	7.7	7.6	7.8	7.6	8.0	7.6	7.9	7.6	7.9	7.6
31	---	---	7.7	7.6	---	---	8.0	7.6	7.9	7.6	---	---
MONTH	7.7	7.5	7.8	7.5	7.9	7.5	8.0	7.6	8.0	7.6	7.9	7.6

14330000 ROGUE RIVER BELOW PROSPECT, OR—Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.0	7.0	7.0	6.0	4.5	4.0	---	---	4.0	3.5	4.0	2.5
2	9.5	6.5	7.0	6.0	6.0	4.5	---	---	3.5	3.0	4.5	3.0
3	8.0	6.0	6.0	5.0	8.0	6.0	---	---	4.5	3.0	5.5	4.5
4	8.0	6.0	5.0	4.0	9.0	8.0	4.5	4.0	4.5	4.0	6.0	5.0
5	8.5	6.5	5.5	5.0	---	---	4.5	4.0	5.0	4.5	5.5	5.0
6	7.5	6.5	7.5	6.0	---	---	4.0	3.5	5.0	4.5	6.0	5.0
7	---	---	8.5	5.0	5.5	4.0	4.0	3.5	5.0	4.0	6.0	5.5
8	---	---	5.0	4.0	4.0	2.5	5.0	4.0	4.5	3.5	5.5	5.0
9	---	---	4.0	3.0	3.5	2.5	5.0	4.5	4.5	4.0	6.0	5.0
10	---	---	4.5	3.5	4.0	3.5	5.0	4.5	4.0	3.0	5.5	4.5
11	---	---	5.5	4.5	4.5	4.0	4.5	4.0	3.5	3.0	5.5	5.0
12	---	---	5.5	4.0	5.0	4.5	4.5	4.0	3.0	2.5	5.0	4.0
13	---	---	6.0	5.0	5.5	5.0	5.0	4.5	4.0	3.0	5.0	4.0
14	8.5	6.5	5.5	5.0	---	---	5.0	5.0	4.0	3.5	5.0	3.5
15	8.5	6.5	6.5	5.5	---	---	5.0	4.5	3.5	3.0	5.0	3.5
16	8.5	7.0	---	---	---	---	4.5	4.5	3.0	3.0	6.0	3.5
17	8.5	6.5	---	---	---	---	5.0	4.5	4.0	3.0	6.5	4.5
18	8.0	6.5	---	---	---	---	4.5	4.5	5.0	4.0	7.0	5.0
19	8.0	6.5	---	---	---	---	5.0	4.5	5.0	4.0	7.0	5.5
20	7.5	6.5	---	---	---	---	5.0	4.5	5.0	3.5	7.5	5.5
21	7.0	5.5	---	---	---	---	5.0	4.5	5.5	4.0	7.5	6.0
22	6.5	5.5	---	---	---	---	4.5	3.5	5.5	4.0	7.0	6.5
23	7.0	6.0	---	---	---	---	3.5	2.5	5.0	4.5	6.0	5.5
24	7.5	6.5	---	---	---	---	3.0	2.0	5.5	5.0	5.5	4.5
25	8.5	7.5	---	---	---	---	4.0	2.5	5.0	4.5	7.0	5.0
26	---	---	---	---	---	---	5.0	4.0	5.0	4.5	7.5	6.0
27	7.0	6.0	---	---	---	---	4.0	3.5	5.0	4.0	8.0	6.5
28	6.5	6.0	---	---	---	---	4.5	3.5	4.5	3.0	7.5	6.0
29	6.5	6.0	---	---	---	---	5.0	4.0	---	---	7.0	6.0
30	6.5	6.0	5.0	4.5	---	---	4.5	3.5	---	---	7.5	6.0
31	6.5	6.0	---	---	---	---	4.5	4.0	---	---	6.5	6.0
MONTH	13.0	5.5	8.5	3.0	9.0	2.5	5.0	2.0	5.5	2.5	8.0	2.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.0	5.0	8.0	6.0	10.5	8.5	12.0	7.5	15.0	11.5	12.5	10.0
2	5.0	4.0	8.5	7.0	11.0	8.5	8.5	7.0	15.0	11.5	12.5	10.0
3	5.0	4.0	8.5	6.5	11.5	8.5	7.5	6.0	15.5	11.5	12.0	10.0
4	5.5	4.5	7.5	6.0	12.0	9.0	10.0	6.0	15.5	12.5	11.5	10.0
5	4.5	3.5	7.5	5.0	12.5	9.5	12.0	7.5	16.0	12.5	10.0	9.0
6	4.5	3.0	8.0	5.5	13.0	10.0	14.0	8.0	15.5	12.5	9.5	8.5
7	5.0	3.5	9.5	6.5	12.5	10.0	14.5	11.5	15.0	11.5	9.5	8.5
8	6.5	4.0	10.0	7.5	17.0	10.0	15.0	11.5	15.0	12.0	9.0	8.0
9	7.5	5.0	9.5	8.5	12.0	10.0	15.0	11.5	14.5	12.0	8.5	7.5
10	8.5	6.0	8.5	7.5	10.0	8.5	14.5	11.0	14.0	11.5	9.0	8.0
11	8.0	6.5	8.0	7.0	11.0	7.5	13.5	10.5	17.0	11.0	9.5	8.0
12	7.5	5.5	7.0	6.0	12.0	10.0	14.0	10.0	12.0	11.0	9.5	7.5
13	7.0	5.5	8.5	6.5	11.5	10.0	14.5	11.0	11.0	10.0	9.0	8.0
14	6.0	5.5	8.0	7.0	10.5	8.5	15.0	11.5	11.5	8.5	10.0	8.0
15	5.5	5.0	8.5	6.5	11.0	8.0	14.5	12.5	10.5	9.5	10.0	8.0
16	5.0	4.0	8.0	5.5	11.5	8.0	12.5	11.0	10.5	9.0	9.5	7.5
17	5.0	4.0	9.0	6.5	13.0	9.0	14.0	10.0	11.0	8.5	8.5	7.0
18	6.0	4.5	10.0	7.5	11.5	10.5	14.5	10.5	11.5	8.5	8.0	6.5
19	6.0	5.0	11.0	9.0	12.5	9.0	15.0	11.5	14.0	9.0	8.0	5.5
20	5.5	4.5	11.0	9.0	14.0	10.5	14.5	11.5	14.5	9.5	8.0	6.0
21	5.0	3.5	10.5	8.5	14.5	11.5	15.0	11.5	10.5	9.0	8.5	7.0
22	5.5	4.5	9.5	8.0	13.5	10.5	14.5	11.5	10.0	8.5	9.5	7.0
23	6.0	4.5	8.0	7.0	12.5	10.0	15.5	12.0	10.0	8.5	9.5	7.5
24	6.5	5.5	7.0	6.0	10.0	9.0	15.5	12.0	11.5	9.0	10.0	8.0
25	6.5	6.0	7.5	5.5	9.0	7.5	15.5	12.5	11.0	9.0	9.5	8.0
26	7.0	6.5	8.0	6.5	10.5	6.5	15.5	13.0	11.5	9.0	10.5	8.0
27	7.5	6.0	9.0	6.5	12.0	8.0	15.0	12.0	12.0	9.0	10.5	9.0
28	7.5	7.0	10.5	7.5	10.5	9.0	15.0	11.5	12.5	9.5	10.0	8.5
29	8.0	6.0	10.5	8.0	9.0	7.5	15.0	11.5	13.0	10.0	9.5	7.5
30	7.5	6.5	10.0	7.5	10.5	7.0	15.5	12.0	13.0	11.0	9.5	8.0
31	---	---	10.5	7.5	---	---	15.0	12.0	12.5	10.5	---	---
MONTH	8.5	3.0	11.0	5.0	17.0	6.5	15.5	6.0	17.0	8.5	12.5	5.5

14330000 ROGUE RIVER BELOW PROSPECT, OR--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	0	0	0	1	0	0	7	2	4	---	---	---
2	0	0	0	3	0	1	3	3	3	---	---	---
3	1	0	1	2	2	2	3	3	3	---	---	---
4	1	1	1	2	0	1	3	3	3	2	2	2
5	1	1	1	3	---	---	---	---	---	10	2	2
6	1	1	1	---	---	---	---	---	---	3	2	2
7	1	1	1	---	---	---	4	1	2	3	2	2
8	---	---	---	---	---	---	5	1	4	2	2	2
9	---	---	---	---	---	---	4	3	3	4	2	3
10	---	---	---	1	0	1	3	2	3	3	2	3
11	---	---	---	1	1	1	10	2	5	3	2	2
12	---	---	---	1	1	1	10	4	6	2	2	2
13	1	1	1	1	1	1	15	1	6	4	2	2
14	1	1	1	1	1	1	5	2	4	3	2	2
15	1	1	1	4	1	2	40	3	15	3	2	2
16	1	1	1	---	---	---	100	---	---	4	2	3
17	1	1	1	---	---	---	---	---	---	4	3	4
18	1	1	1	---	---	---	---	---	---	3	2	3
19	1	1	1	---	---	---	---	---	---	2	1	2
20	1	1	1	---	---	---	---	---	---	---	---	---
21	1	1	1	---	---	---	---	---	---	3	2	2
22	1	1	1	---	---	---	---	---	---	3	2	2
23	1	1	1	---	---	---	---	---	---	2	2	2
24	1	1	1	---	---	---	---	---	---	2	2	2
25	---	---	---	---	---	---	---	---	---	2	2	2
26	---	---	---	---	---	---	---	---	---	2	1	2
27	1	0	1	---	---	---	---	---	---	2	1	1
28	0	0	0	---	---	---	---	---	---	1	1	1
29	1	0	0	20	1	---	---	---	---	1	1	1
30	1	1	1	25	1	8	---	---	---	1	1	1
31	1	0	1	---	---	---	---	---	---	2	1	1
MONTH	1	0	1	25	0	2	100	1	5	10	1	2

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1	1	1	7	6	7	0	0	0	1	1	1
2	3	1	2	15	1	4	0	0	0	1	1	1
3	15	4	9	1	1	1	0	0	0	1	1	1
4	6	3	4	1	1	1	0	0	0	1	1	1
5	3	1	2	1	1	1	0	0	0	1	0	1
6	10	1	3	1	1	1	0	0	0	---	---	---
7	3	2	3	1	0	1	1	0	1	---	---	---
8	4	3	4	2	0	1	1	1	1	---	---	---
9	5	0	3	4	1	2	1	1	1	---	---	---
10	1	0	1	10	1	3	1	1	1	---	---	---
11	1	0	1	3	2	2	2	1	1	---	---	---
12	1	1	1	3	2	2	1	1	1	4	4	4
13	1	1	1	3	1	2	1	1	1	4	3	4
14	1	0	1	1	1	1	1	1	1	4	3	3
15	1	1	1	1	1	1	1	1	1	4	2	3
16	1	1	1	1	1	1	1	1	1	2	1	2
17	1	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1	1	1	1	1
19	1	1	1	1	1	1	1	1	1	2	1	1
20	1	1	1	1	1	1	3	1	1	2	1	2
21	1	1	1	1	1	1	1	1	1	2	2	2
22	1	1	1	3	1	2	1	1	1	2	1	2
23	1	1	1	2	2	2	1	1	1	2	1	1
24	1	1	1	2	1	2	1	1	1	1	1	1
25	1	1	1	2	1	1	1	1	1	2	1	1
26	1	1	1	2	1	1	2	1	1	1	1	1
27	1	1	1	2	1	1	2	1	1	1	1	1
28	7	1	4	2	1	1	1	1	1	1	1	1
29	---	---	---	1	1	1	1	1	1	1	1	1
30	---	---	---	1	0	1	1	1	1	1	1	1
31	---	---	---	0	0	0	---	---	---	2	1	2
MONTH	15	0	2	15	0	2	3	0	1	4	0	2

14330000 ROGUE RIVER BELOW PROSPECT, OR—Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	40	2	4	2	1	1	2	0	1	1	0	1
2	3	1	2	2	0	1	1	0	1	1	0	1
3	4	3	3	3	1	1	1	0	1	1	0	1
4	4	3	3	---	---	3	1	1	1	1	0	0
5	4	3	3	---	---	0	1	0	1	1	0	0
6	3	3	3	---	---	1	1	1	1	1	0	1
7	3	3	3	1	1	1	15	1	2	1	0	0
8	4	3	3	1	1	1	3	1	2	0	0	0
9	4	3	4	1	1	1	2	1	1	0	0	0
10	3	2	3	1	1	1	1	1	1	3	1	2
11	3	2	2	1	1	1	2	1	1	2	1	2
12	4	2	2	1	1	1	1	1	1	1	0	1
13	2	2	2	1	1	1	1	0	1	7	0	1
14	2	1	1	1	1	1	1	0	1	2	1	1
15	2	1	1	1	1	1	1	0	1	1	0	1
16	85	1	5	1	1	1	1	0	1	1	0	0
17	1	1	1	1	1	1	1	0	1	0	0	0
18	15	0	3	1	0	1	1	0	0	1	0	0
19	10	1	2	1	0	1	2	1	1	1	0	0
20	---	---	---	1	1	1	2	0	1	1	0	0
21	---	---	---	1	1	1	1	0	1	1	0	0
22	---	---	---	1	0	1	1	0	1	1	0	0
23	2	1	2	1	0	1	1	0	1	1	0	0
24	1	1	1	1	1	1	3	0	1	1	0	0
25	2	1	1	1	1	1	2	1	1	1	0	0
26	2	0	1	2	1	1	2	1	1	1	0	1
27	2	1	1	2	1	1	1	1	1	1	1	1
28	3	0	1	1	1	1	1	0	1	1	0	1
29	3	1	1	2	1	1	1	1	1	1	0	1
30	2	1	1	1	0	1	1	1	1	1	0	1
31	---	---	---	1	0	1	1	0	1	---	---	---
MONTH	85	0	2	3	0	1	15	0	1	7	0	1

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1	2.4	2	5.2	15	86	8	36	6	24	4	16
2	1	2.3	2	5.8	14	84	8	36	13	54	3	12
3	1	2.2	2	5.5	144	1690	8	36	36	239	2	8.0
4	1	2.2	2	5.1	64	555	6	27	11	64	2	8.1
5	1	2.2	2	5.4	17	115	5	23	18	97	1	4.1
6	1	2.2	2	5.5	22	136	4	18	8	43	2	8.6
7	1	2.2	2	5.3	21	128	3	13	6	35	2	8.4
8	1	2.2	2	5.1	11	59	4	17	5	29	5	24
9	1	2.1	2	5.0	8	39	7	33	4	21	5	25
10	1	2.1	1	2.4	11	49	5	25	3	15	4	19
11	1	2.1	1	2.4	10	51	4	19	2	9.5	3	14
12	2	4.2	1	2.4	13	72	5	23	2	9.1	2	9.0
13	2	4.2	1	2.4	135	1690	5	23	2	8.7	2	8.7
14	2	4.2	5	12	558	10900	5	24	1	4.3	4	17
15	3	6.2	5	15	809	17800	5	25	1	4.2	2	8.2
16	2	4.1	3	10	70	792	5	26	1	4.0	2	8.1
17	2	4.1	3	9.0	25	220	8	46	0	.00	3	12
18	2	4.1	2	5.6	15	105	5	27	0	.00	3	12
19	2	4.1	2	5.4	10	59	5	26	1	4.0	3	13
20	3	6.2	1	2.3	10	55	5	26	0	.00	2	8.7
21	3	6.2	1	2.5	10	51	4	20	0	.00	2	9.0
22	1	2.1	8	26	10	49	4	20	1	4.3	9	44
23	1	2.1	8	26	8	40	5	24	0	.00	4	20
24	6	13	287	2860	8	41	4	18	0	.00	4	19
25	6	17	263	3390	6	29	3	13	2	8.8	3	14
26	5	14	435	910	6	28	4	17	1	4.3	5	23
27	5	12	15	135	5	24	5	21	3	13	4	19
28	1	2.3	8	56	7	34	3	12	5	21	4	19
29	1	2.3	25	168	6	30	3	12	---	---	3	14
30	3	8.6	27	176	8	41	6	23	---	---	3	14
31	3	8.0	---	---	8	38	9	36	---	---	2	9.3
TOTAL	---	153.2	---	7866.3	---	35090	---	745	---	716.20	---	448.2

14330000 ROGUE RIVER BELOW PROSPECT, OR--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	2	9.7	2	8.9	2	7.5	3	9.2	3	7.6	1	2.3
2	2	9.2	2	8.8	3	11	4	12	4	10	2	4.7
3	1	4.4	2	8.8	5	19	3	9.4	4	10	1	2.3
4	3	13	2	8.6	6	23	4	12	4	9.9	1	2.3
5	3	13	1	4.2	5	19	3	8.9	4	9.9	2	4.8
6	2	8.4	1	4.1	4	15	2	5.9	4	9.9	2	5.1
7	4	16	3	12	3	11	2	5.9	3	7.0	1	2.6
8	2	8.0	2	8.2	7	27	4	12	3	7.1	1	2.5
9	4	16	2	8.5	7	26	5	14	4	9.4	0	.00
10	5	21	3	13	4	15	4	11	4	9.4	4	13
11	5	21	4	17	4	15	3	8.4	3	6.9	4	13
12	5	21	4	17	4	14	3	8.4	3	7.0	5	13
13	6	25	3	12	2	6.9	2	5.6	4	9.6	2	5.2
14	5	20	1	4.2	1	3.4	4	11	3	7.1	2	5.3
15	6	24	3	14	2	6.7	4	11	3	7.1	1	2.5
16	6	24	3	13	3	9.8	3	8.3	2	4.9	1	2.5
17	4	16	4	17	2	6.5	3	8.2	2	4.8	2	4.9
18	4	15	2	8.3	3	10	4	11	2	4.7	2	5.1
19	4	15	3	13	4	14	3	8.1	2	4.6	1	2.5
20	4	16	5	21	4	13	2	5.3	2	4.7	1	2.4
21	3	12	5	21	3	10	3	7.9	2	4.6	1	2.4
22	4	16	4	17	4	13	4	11	5	12	0	.00
23	2	8.0	4	16	3	9.6	3	7.9	2	4.8	0	.00
24	3	12	4	16	2	6.3	2	5.2	2	4.7	0	.00
25	3	13	3	12	1	3.2	2	5.2	2	5.2	0	.00
26	3	14	4	15	3	9.2	4	10	2	4.8	0	.00
27	3	16	6	23	2	6.2	3	7.8	1	2.3	0	.00
28	2	9.3	6	23	1	3.0	4	10	2	4.6	0	.00
29	3	14	4	15	2	6.1	4	10	2	4.6	1	2.3
30	2	9.1	3	11	4	12	4	10	2	4.6	0	.00
31	---	---	4	15	---	---	3	7.6	3	6.9	---	---
TOTAL	---	439.1	---	405.6	---	351.4	---	278.2	---	210.7	---	100.70

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	OXYGEN, DIS-SOLVED (MG/L)
OCT		
13...	1100	11.6
26...	1400	11.1
NOV		
07...	1430	11.8
29...	1030	12.2
DEC		
06...	1230	11.6
20...	1200	13.3
JAN		
04...	1240	11.6
31...	1150	12.5
FEB		
14...	1240	11.7
28...	1415	11.7
MAR		
30...	1400	11.2
APR		
07...	0950	12.3
APR		
25...	1130	11.3
MAY		
11...	1300	11.3
24...	1120	10.2
JUN		
09...	1145	10.1
22...	1405	10.1
JUL		
06...	1400	9.8
18...	1200	10.0
AUG		
04...	1030	9.8
18...	1300	11.0
30...	1240	10.2
SEP		
14...	1130	11.4
28...	1200	10.9

14330000 ROGUE RIVER BELOW PROSPECT, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
24...	0800	2160	122	712	77
24...	1430	3520	621	5900	49
24...	1900	4330	306	3580	47
24...	2300	4630	427	5340	49
25...	0230	5300	547	7830	47
29...	1100	2330	204	1280	71
29...	1510	2570	28	194	73
29...	2330	2660	55	395	54
30...	0630	2550	34	234	77
30...	1100	2440	32	211	71
DEC					
03...	0630	4670	180	2270	47
03...	1030	4760	177	2280	36
03...	1430	4400	175	2080	50
03...	1800	3900	82	863	64
03...	2200	3660	83	820	64
04...	0330	3430	147	1360	29
04...	0830	3210	43	373	68
04...	1400	3000	35	283	66
13...	1230	3680	94	934	53
13...	1400	3850	117	1220	51
13...	1830	5120	278	3840	38
13...	2230	5740	276	4280	50
14...	0130	6030	405	6590	38
14...	0430	6290	329	5590	35
14...	0730	6200	350	5860	38
14...	1100	6380	338	5820	37
14...	1400	6380	337	5810	37
14...	1520	6470	488	8530	29
14...	1700	7040	538	10200	29
14...	1930	7910	805	17200	23
14...	2200	8490	1203	27600	25
14...	2400	8920	1508	36300	28
15...	0230	9020	1576	38400	26
15...	0430	9060	1294	31700	30

14332001 SOUTH FORK ROGUE RIVER NEAR PROSPECT, OR

LOCATION.--Lat 42°42'30", long 122°23'30", in SE¼SW¼ sec.7, T.33 S., R.4 E., Jackson County, Hydrologic Unit 17100307, in Rogue River National Forest on left bank 0.3 mi (0.5 km) downstream from South Fork dam and intake of South Fork power canal, 0.31 mi (0.50 km) downstream from Imnaha Creek, 5.6 mi (9.0 km) southeast of Prospect, and at mile 10.2 (16.4 km).

DRAINAGE AREA.--83.8 mi² (217 km²). Area at site above Imnaha Creek used October 1931 to September 1949, 61.3 mi² (158.8 km²), and Imnaha Creek near Prospect, 22.2 mi² (57.5 km²).

PERIOD OF RECORD.--April 1924 to September 1931, October 1949 to current year. Equivalent records for period October 1931 to September 1949 may be obtained from combined flow of South Fork Rogue River above Imnaha Creek, near Prospect and Imnaha Creek near Prospect.

REVISED RECORDS.--WSP 1318: 1925(M), 1927(M), 1930(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,300 ft (1,006 m), from topographic map. Prior to Sept. 10, 1965, at site 1,000 ft (305 m) upstream at different datum.

REMARKS.--Records good. All records given herein include flow in South Fork power canal (completed in March 1932) which diverts 1,500 ft (457 m) above station and returns water to Rogue River above South Fork Rogue River; practically no storage above diversion dam.

AVERAGE DISCHARGE.--54 years (water years 1925-78), 179 ft³/s (5.069 m³/s), 129,700 acre-ft/yr (160 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 7,010 ft³/s (199 m³/s) Dec. 22, 1964, gage height, 11.1 ft (3.38 m), from floodmark, from rating curve extended above 410 ft³/s (11.6 m³/s) on basis of measurement of flow over dam of 3,180 ft³/s (90.1 m³/s); no flow Jan. 31, 1950, Sept. 29, 30, 1967 (entire flow diverted to canal).

Combined flow, maximum discharge, 7,010 ft³/s (199 m³/s) Dec. 22, 1964 (no flow in canal); minimum daily, about 38 ft³/s (1.08 m³/s) Aug. 1-31, 1931.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 1,520 ft³/s (43.0 m³/s) Dec. 14, gage height, 5.08 ft (1.548 m); minimum daily, 0.99 ft³/s (0.028 m³/s) Sept. 29, 30.

Combined flow, maximum discharge, 1,650 ft³/s (46.7 m³/s) Dec. 14; minimum daily, 57 ft³/s (1.61 m³/s) Oct. 16, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	71	265	230	182	169	253	188	177	140	91	77
2	69	91	320	229	188	167	222	182	179	145	89	76
3	68	87	438	223	325	165	204	185	174	154	89	73
4	64	77	373	222	294	166	198	182	172	152	88	74
5	64	78	308	219	281	171	196	170	171	147	86	82
6	63	76	293	215	270	181	189	168	168	143	84	90
7	66	77	272	205	271	174	182	160	162	141	85	83
8	62	75	252	208	257	241	174	171	140	133	82	94
9	61	73	239	219	246	243	180	176	158	118	83	84
10	60	70	231	232	232	205	191	186	163	127	82	94
11	61	68	249	227	223	210	199	192	162	122	81	95
12	59	74	270	222	216	200	192	185	157	124	81	87
13	59	72	512	232	203	193	184	178	146	118	84	83
14	59	77	829	240	197	185	180	189	143	119	80	85
15	58	105	712	250	192	180	176	254	138	118	82	83
16	57	106	618	240	184	175	173	218	137	118	89	79
17	58	102	516	250	185	173	169	205	138	120	83	76
18	58	89	467	240	188	173	165	186	143	115	83	81
19	58	86	412	240	188	173	168	198	140	107	78	79
20	58	68	366	242	184	174	167	205	138	109	80	78
21	58	72	336	235	184	188	165	214	134	107	80	71
22	58	158	319	226	184	192	165	204	129	108	102	80
23	57	117	298	214	183	201	165	190	129	106	85	70
24	58	317	278	206	184	191	167	188	133	99	83	72
25	78	475	259	204	184	191	173	191	133	101	85	73
26	72	658	247	202	182	186	200	187	124	105	81	72
27	61	433	269	197	177	187	199	191	125	106	78	72
28	64	334	261	194	171	188	189	188	115	98	78	72
29	65	317	259	185	---	189	183	190	117	95	77	70
30	95	298	253	183	---	191	181	185	145	93	79	73
31	73	---	240	181	---	194	---	175	---	91	78	---
TOTAL	1978	4801	10961	6812	5955	5816	5549	5881	4390	3679	2586	2378
MEAN	63.8	160	354	220	213	188	185	190	146	119	83.4	79.3
MAX	95	658	829	250	325	243	253	254	179	154	102	95
MIN	57	68	231	181	171	165	165	160	115	91	77	70
AC-FT	3920	9520	21740	13510	11810	11540	11010	11660	8710	7300	5130	4720

CAL YR 1977 TOTAL 43896 MEAN 120 MAX 829 MIN 57 AC-FT 87070
WTR YR 1978 TOTAL 60786 MEAN 167 MAX 829 MIN 57 AC-FT 120600

14333500 RED BLANKET CREEK NEAR PROSPECT, OR

LOCATION.--Lat 42°46'40", long 122°25'35", in NW¼NE¼ sec.23, T.32 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 1.8 mi (2.9 km) downstream from Lick Creek, 3.7 mi (6.0 km) northeast of Prospect, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--45.5 mi^2 (117.8 km^2).

PERIOD OF RECORD.--May 1925 to current year.

REVISED RECORDS.--WSP 1318: 1926-28, 1930. WSP 1348: 1943(M), 1948(M), 1953. WSP 1738: 1927(M), drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,780 ft (847 m), from river-profile map. Prior to Sept. 7, 1949, nonrecording gage at several sites within 2.5 mi (4.0 km) of present site at various datums.

REMARKS.--Records good. No regulation. Small diversion above station for irrigation below.

AVERAGE DISCHARGE.--53 years, 117 ft^3/s (3.313 m^3/s), 84,770 acre-ft/yr (105 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,190 ft^3/s (90.3 m^3/s) Dec. 22, 1964, gage height, 7.85 ft (2.393 m), from rating curve extended above 1,500 ft^3/s (42.5 m^3/s); minimum observed, 34 ft^3/s (0.96 m^3/s) Sept. 3, 4, 25, Oct. 9, 16, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft^3/s (8.50 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 26	0130	*1,220	34.6	*4.83	1.472	Dec. 14	2000	1,210	34.3	4.81	1.466
Dec. 3	0600	427	12.1	3.55	1.082						

Minimum, 51 ft^3/s (1.44 m^3/s) Oct. 17-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	74	200	150	108	103	134	108	125	93	58	55
2	63	98	207	146	128	103	125	108	131	93	58	55
3	62	80	364	143	204	101	119	108	134	91	58	55
4	60	74	301	137	174	101	116	108	140	88	58	57
5	58	78	244	137	163	106	119	103	143	84	57	63
6	60	76	223	140	157	103	113	103	150	82	57	68
7	58	72	211	134	170	103	108	103	146	82	57	66
8	55	70	185	134	160	143	106	108	143	80	57	66
9	55	66	167	146	150	134	106	111	143	80	57	70
10	55	65	153	143	140	122	108	108	143	80	57	88
11	55	65	177	137	131	119	111	116	134	78	57	78
12	55	63	170	140	128	113	108	106	128	78	57	65
13	54	68	411	143	122	111	106	106	122	76	58	65
14	54	70	1030	143	119	103	103	113	119	76	57	63
15	54	96	822	160	116	101	103	146	113	76	60	62
16	54	96	443	153	113	101	103	128	111	76	60	60
17	52	80	344	153	111	98	98	125	108	74	58	60
18	52	78	279	150	111	101	96	122	111	74	57	63
19	52	74	240	150	111	101	98	131	106	74	57	58
20	52	72	215	150	113	103	98	137	103	72	57	58
21	52	78	200	150	116	108	96	140	101	72	60	57
22	51	119	185	143	116	113	96	137	101	70	65	57
23	52	108	181	131	116	122	96	131	98	68	58	57
24	54	416	177	128	116	119	98	128	101	68	58	55
25	96	527	163	125	116	113	103	125	98	66	68	55
26	70	715	157	125	113	113	119	119	96	68	58	55
27	60	330	167	116	111	116	119	122	93	66	57	54
28	58	248	163	113	106	119	113	122	93	66	55	54
29	65	252	174	111	---	122	111	128	91	63	55	54
30	106	227	174	108	---	122	113	122	93	60	55	54
31	78	---	157	108	---	122	---	122	---	58	57	---
TOTAL	1868	4535	8284	4247	3639	3459	3242	3694	3518	2332	1798	1827
MEAN	60.3	151	267	137	130	112	108	119	117	75.2	58.0	60.9
MAX	106	715	1030	160	204	143	134	146	150	93	68	88
MIN	51	63	153	108	106	98	96	103	91	58	55	54
AC-FT	3710	9000	16430	8420	7220	6860	6430	7330	6980	4630	3570	3620

CAL YR 1977 TOTAL 33818 MEAN 92.7 MAX 1030 MIN 44 AC-FT 67080
WTR YR 1978 TOTAL 42443 MEAN 116 MAX 1030 MIN 51 AC-FT 84190

14334700 SOUTH FORK ROGUE RIVER, SOUTH OF PROSPECT, OR

LOCATION.--Lat 42°42'45", long 122°30'20", in NW¼SE¼ sec.7, T.33 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 200 ft (61 m) upstream from unnamed tributary, 0.6 mi (1.0 km) upstream from Smith Creek, 1.2 mi (1.9 km) downstream from Beaver Creek, 2.8 mi (4.5 km) southwest of Prospect, and at mile 2.4 (3.9 km).

DRAINAGE AREA.--246 mi^2 (637 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,030 ft (619 m), from topographic map.

REMARKS.--Water-discharge records good. Some regulation by South Fork canal dam upstream. Power diversions above station from South Fork Rogue River, Middle Fork Rogue River, and Red Blanket Creek divert water to Rogue River via Main Canal. During summer base flow all of streamflow is diverted for power except that for fish life. Base flow at station is principally from springs downstream from power diversions.

AVERAGE DISCHARGE.--10 years, 409 ft^3/s (11.58 m^3/s), 296,300 acre-ft/yr (365 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,880 ft^3/s (280 m^3/s) Mar. 3, 1972, gage height, 12.71 ft (3.874 m), from floodmark; minimum, 54 ft^3/s (1.53 m^3/s) Aug. 16-19, 1977; minimum daily, 54 ft^3/s (1.53 m^3/s) Sept. 24-30, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 20.1 ft (6.13 m), Dec. 22, 1964, from floodmarks at gage, discharge, 28,500 ft^3/s (807 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,840 ft^3/s (165 m^3/s) Dec. 15, gage height, 10.70 ft (3.261 m); minimum, 61 ft^3/s (1.73 m^3/s) Oct. 14-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	76	813	607	346	304	513	339	336	180	103	101
2	81	122	847	595	410	295	443	323	336	180	103	98
3	75	100	1870	579	951	286	389	326	336	186	101	99
4	68	85	1590	551	887	286	383	320	346	171	99	101
5	66	91	1200	544	818	304	389	295	355	157	101	112
6	68	98	962	555	770	323	383	277	362	145	101	128
7	70	89	893	517	822	295	362	272	352	139	100	119
8	66	82	756	513	827	498	342	286	330	134	98	114
9	65	79	669	555	747	517	346	317	320	119	98	119
10	64	76	599	571	631	453	366	339	339	119	96	140
11	64	73	747	551	583	417	393	366	336	118	119	135
12	64	74	761	559	548	389	372	326	280	118	99	116
13	63	79	1330	571	502	372	352	301	263	116	99	112
14	61	84	4050	583	468	339	339	326	239	114	99	114
15	61	167	4200	636	453	320	326	521	227	114	107	108
16	61	192	2320	615	417	301	326	432	218	114	112	105
17	61	121	1860	619	403	295	289	393	211	116	109	105
18	61	105	1470	615	414	289	260	369	229	116	105	112
19	61	98	1180	615	407	289	269	386	211	115	105	112
20	61	95	951	623	400	286	274	414	179	114	104	111
21	61	131	882	615	393	307	269	439	177	112	108	108
22	62	301	779	595	386	352	263	428	169	112	119	100
23	71	247	703	536	383	402	263	372	160	111	109	99
24	68	1420	681	490	383	400	266	359	162	123	107	99
25	116	1820	640	479	369	362	289	355	162	118	122	101
26	96	3350	603	472	359	352	369	333	150	112	109	108
27	75	1660	656	443	339	352	386	339	140	108	107	116
28	66	1180	656	421	320	359	352	339	147	107	108	112
29	68	1100	669	407	---	366	330	359	196	105	111	96
30	115	1000	716	376	---	366	349	342	171	104	107	98
31	89	---	648	333	---	383	---	323	---	103	105	---
TOTAL	2219	14195	36701	16741	14736	10859	10252	10916	7439	3900	3270	3298
MEAN	71.6	473	1184	540	526	350	342	352	248	126	105	110
MAX	116	3350	4200	636	951	517	513	521	362	186	122	140
MIN	61	73	599	333	320	286	260	272	140	103	96	96
AC-FT	4400	28160	72800	33210	29230	21540	20330	21650	14760	7740	6490	6540

CAL YR 1977 TOTAL 85679 MEAN 235 MAX 4200 MIN 55 AC-FT 169900
WTR YR 1978 TOTAL 134526 MEAN 369 MAX 4200 MIN 61 AC-FT 266800

14334700 SOUTH FORK ROGUE RIVER SOUTH OF PROSPECT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1968 to current year.
SEDIMENT RECORDS: October 1976 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 19.0°C July 24, 1978; minimum, 0.0°C Feb. 5, 1976, Nov. 21, 1977.
SEDIMENT CONCENTRATIONS: Maximum daily, 654 mg/l Nov. 26, 1977; minimum daily, 0 mg/l on many days in 1976-78.
SEDIMENT DISCHARGE: Maximum daily, 6,180 tons (5,610 tonnes); minimum daily, 0 tons (0 tonnes) on many days in 1976-78.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 19.0°C July 24; minimum, 0.0°C Nov. 21.
SEDIMENT CONCENTRATIONS: Maximum daily, 654 mg/l Nov. 26; minimum daily, 0 mg/l Mar. 7, 12, 13.
SEDIMENT DISCHARGE: Maximum daily, 6,180 tons (5,610 tonnes); minimum daily, 0 tons (0 tonnes) Mar. 7, 12, 13.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.5	7.0	9.0	7.5	---	---	4.0	2.5	5.0	4.0	5.5	2.5
2	9.5	7.0	8.5	6.5	6.0	5.5	4.5	4.0	5.0	4.0	6.0	4.0
3	9.0	7.0	6.5	5.0	---	---	5.5	4.5	6.0	5.0	7.0	5.5
4	9.5	7.0	6.5	5.0	---	---	5.0	4.0	5.5	4.5	7.5	5.5
5	9.5	8.5	7.0	6.0	---	---	5.5	4.5	6.5	5.5	6.5	6.0
6	9.5	8.0	7.5	6.5	---	---	5.5	4.5	6.0	4.5	7.5	5.0
7	9.0	7.5	7.0	6.0	5.5	4.5	5.0	4.0	5.5	5.0	7.5	6.0
8	8.5	6.5	6.0	4.0	4.5	3.5	6.0	5.0	5.0	4.0	6.5	6.0
9	8.0	6.5	5.0	4.0	4.5	3.0	6.0	5.5	5.0	4.5	7.5	5.5
10	8.5	6.5	6.0	4.5	4.5	3.5	6.0	5.0	4.5	3.0	7.0	5.0
11	9.0	7.0	6.5	6.0	5.5	4.5	5.5	4.0	4.0	3.0	6.0	5.0
12	9.0	7.5	6.5	5.0	5.5	5.0	6.0	4.5	4.0	3.0	6.0	4.0
13	9.5	8.0	7.0	6.5	6.0	5.5	6.0	5.5	5.0	3.0	6.5	4.0
14	9.5	7.5	7.5	6.5	6.0	5.5	6.0	5.5	5.0	3.5	6.0	3.0
15	9.5	7.5	8.0	7.0	5.5	[illegible]	6.0	5.0	5.0	4.0	6.5	3.0
16	9.5	8.0	6.5	5.5	4.5	4.0	6.0	5.0	4.0	3.5	8.0	4.0
17	9.0	7.5	5.0	4.5	4.5	3.5	6.0	5.0	5.0	3.5	8.5	4.5
18	9.0	7.5	4.0	3.5	4.5	3.5	5.5	4.5	6.5	5.0	9.0	5.0
19	9.0	8.0	3.5	2.0	3.5	2.5	6.0	5.0	6.5	4.0	9.0	5.5
20	9.0	7.5	2.5	1.0	3.5	2.5	6.5	5.5	6.5	4.0	9.5	5.5
21	8.0	7.0	2.5	.0	4.5	3.5	5.5	5.0	7.0	4.5	10.0	6.5
22	8.5	6.5	2.5	1.5	5.0	4.0	5.0	4.0	7.0	4.0	8.5	7.5
23	9.5	8.5	3.5	2.5	5.5	4.5	4.0	3.0	7.0	4.5	8.0	6.0
24	10.0	8.0	3.5	3.0	5.5	4.5	3.5	2.5	7.0	5.5	7.5	5.5
25	10.0	9.0	---	---	4.0	3.5	5.0	3.5	7.0	5.0	9.0	5.0
26	8.5	7.5	---	---	5.0	3.5	5.5	4.5	6.5	5.5	9.5	6.0
27	8.5	7.0	---	---	5.5	4.5	4.5	3.5	6.0	4.5	10.0	6.0
28	8.0	7.5	---	---	5.5	4.5	6.0	4.0	5.5	3.0	10.0	6.0
29	8.5	7.5	---	---	5.5	5.0	5.5	4.5	---	---	8.0	6.0
30	8.5	7.0	---	---	4.5	4.0	5.0	3.5	---	---	9.5	7.0
31	8.0	7.0	---	---	4.0	3.0	5.5	4.5	---	---	8.0	6.0
MONTH	10.0	6.5	9.0	.0	6.0	2.5	6.5	2.5	7.0	3.0	10.0	2.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.5	5.5	11.0	6.0	13.0	8.5	14.5	11.5	17.5	13.0	14.5	11.0
2	6.5	5.0	11.0	6.5	13.5	8.0	13.0	11.0	17.0	13.0	15.0	11.0
3	7.0	4.5	11.0	6.5	14.5	9.0	12.5	10.5	17.5	13.0	15.0	11.5
4	7.0	4.5	9.0	5.5	15.0	9.5	15.5	10.0	17.5	14.0	13.5	11.5
5	5.5	4.5	9.5	5.0	15.5	9.5	16.0	10.0	17.5	13.5	11.5	10.5
6	6.5	4.0	11.0	5.0	15.5	10.0	17.0	11.0	17.5	13.5	12.0	10.5
7	7.0	4.5	12.0	6.0	15.5	10.0	17.5	12.0	18.0	14.0	11.5	10.0
8	9.0	4.0	13.0	7.0	15.5	9.5	18.0	12.5	18.0	14.0	11.0	9.0
9	10.0	4.5	11.0	8.5	13.0	10.5	17.0	12.5	17.5	14.0	11.0	10.0
10	11.0	6.0	10.5	8.0	10.5	9.0	16.5	12.0	17.0	13.5	11.0	9.5
11	10.0	5.5	9.0	7.0	14.0	7.5	16.0	11.0	16.0	12.0	12.0	9.0
12	9.5	5.0	8.5	6.0	13.0	10.0	16.5	11.0	15.0	12.5	11.5	8.0
13	8.5	5.0	11.0	7.0	13.0	9.5	17.0	12.0	14.0	11.0	11.5	9.5
14	7.5	5.0	9.0	7.5	13.0	8.5	17.5	13.0	14.5	10.0	12.5	9.0
15	6.5	5.5	8.0	6.5	13.0	7.5	16.5	13.5	14.0	11.0	12.5	9.5
16	6.0	4.5	9.5	6.0	14.0	7.5	15.0	12.0	13.0	11.0	11.0	8.5
17	7.5	4.5	11.5	5.5	15.5	8.5	16.5	11.0	13.5	9.5	9.5	8.0
18	8.5	5.0	12.5	6.5	14.0	10.5	17.0	12.0	14.0	10.0	9.5	7.5
19	7.5	5.5	13.0	8.0	15.5	9.0	17.0	12.5	14.0	10.0	9.5	6.0
20	7.0	5.0	12.0	8.0	16.5	11.5	17.0	12.0	13.5	11.0	10.5	6.5
21	8.0	4.5	13.0	8.5	17.0	11.5	17.0	12.5	12.5	11.0	11.0	8.5
22	7.5	5.5	10.5	6.5	16.0	10.5	17.0	12.5	12.5	10.0	11.0	8.5
23	8.5	5.5	8.5	5.5	14.5	11.0	18.0	13.5	12.5	10.0	11.5	8.0
24	8.0	6.5	7.5	6.0	12.5	10.5	19.0	14.5	13.0	11.0	12.0	9.0
25	9.0	7.0	9.5	5.5	13.0	9.0	18.5	14.5	13.5	11.0	12.0	9.5
26	8.0	7.0	9.5	6.5	15.5	9.0	18.0	15.0	14.0	10.5	12.5	9.0
27	10.0	6.5	11.0	7.0	16.5	10.5	17.5	13.0	14.0	10.0	12.0	10.0
28	10.0	6.5	13.5	8.0	15.0	11.5	17.5	13.0	15.0	10.5	11.0	8.5
29	10.5	5.5	13.0	7.0	13.5	11.0	17.5	13.0	15.5	11.5	11.0	8.0
30	8.5	6.5	12.0	7.0	15.5	10.5	18.0	13.5	15.5	13.0	11.5	8.5
31	---	---	13.5	7.0	---	---	17.5	13.0	15.0	12.5	---	---
MONTH	11.0	4.0	13.5	5.0	17.0	7.5	19.0	10.0	18.0	9.5	15.0	6.0

14334700 SOUTH FORK ROGUE RIVER SOUTH OF PROSPECT, OR--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	5	1.2	5	1.0	17	37	6	9.8	2	1.9	1	.82
2	5	1.1	5	1.6	19	43	3	4.8	5	5.5	1	.80
3	4	.81	3	.81	125	631	5	7.8	50	124	3	2.3
4	4	.73	2	.46	25	107	7	10	13	31	2	1.5
5	4	.71	3	.74	23	75	9	13	6	13	2	1.6
6	4	.73	3	.79	19	49	9	13	3	6.2	1	.87
7	5	.94	2	.48	18	43	8	11	8	18	0	.00
8	5	.89	3	.66	11	22	8	11	4	8.9	5	6.7
9	5	.88	3	.64	7	13	9	13	3	6.1	3	4.2
10	5	.86	2	.41	531	5840	8	12	4	6.8	2	2.4
11	5	.86	3	.59	13	26	6	8.9	4	6.3	1	1.1
12	6	1.0	2	.40	9	18	5	7.5	4	5.9	0	.00
13	6	1.0	5	1.1	112	475	6	9.3	4	5.4	0	.00
14	6	.99	5	1.1	645	5690	7	11	4	5.1	1	.92
15	6	.99	16	7.7	494	6090	8	14	4	4.9	1	.86
16	6	.99	5	2.8	135	846	7	12	4	4.5	1	.81
17	6	.99	2	.65	72	362	8	13	4	4.4	2	1.6
18	6	.99	3	.85	34	135	9	15	4	4.5	3	2.3
19	7	1.2	3	.79	26	83	9	15	4	4.4	3	2.3
20	8	1.3	3	.77	21	54	7	12	4	4.3	2	1.5
21	9	1.5	5	1.8	18	43	7	12	4	4.2	1	.83
22	9	1.5	13	11	13	27	6	9.6	4	4.2	2	1.9
23	9	1.7	7	4.8	11	21	4	5.8	4	4.1	6	7.3
24	8	1.5	200	858	11	20	3	4.0	4	4.1	2	2.2
25	8	2.5	142	779	9	16	5	6.5	4	4.0	2	2.0
26	6	1.6	654	6180	5	8.1	3	3.8	4	3.9	1	.95
27	3	.61	73	329	6	11	3	3.6	4	3.7	1	.95
28	3	.53	38	121	7	12	3	3.4	2	1.7	1	.97
29	2	.37	35	104	9	16	5	5.5	---	---	2	2.0
30	9	2.9	20	54	6	12	3	3.0	---	---	4	4.0
31	7	1.7	---	---	4	7.0	2	1.8	---	---	6	6.2
TOTAL	---	35.57	---	8466.94	---	20832.1	---	282.1	---	301.0	---	61.88

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12	17	2	1.8	1	.91	7	3.4	2	.56	1	.27
2	8	9.6	1	.87	1	.91	4	1.9	3	.83	1	.26
3	5	5.3	3	2.6	1	.91	2	1.0	4	1.1	1	.27
4	3	3.1	2	1.7	2	1.9	2	.92	3	.80	1	.27
5	5	5.3	2	1.6	2	1.9	3	1.3	3	.82	2	.60
6	5	5.2	2	1.5	2	2.0	3	1.2	2	.55	2	.69
7	5	4.9	2	1.5	2	1.9	10	3.8	3	.81	2	.64
8	3	2.8	2	1.5	1	.89	4	1.4	1	.26	2	.62
9	3	2.8	2	1.7	3	2.6	4	1.3	2	.53	3	.96
10	3	3.0	2	1.8	2	1.8	3	.96	1	.26	4	1.5
11	2	2.1	3	3.0	1	.91	6	1.9	2	.64	3	1.1
12	3	3.0	3	2.6	1	.76	2	.64	2	.53	2	.63
13	2	1.9	2	1.6	1	.71	3	.94	2	.53	2	.60
14	2	1.8	4	3.5	2	1.3	2	.62	3	.80	2	.62
15	3	2.6	6	8.4	1	.61	3	.92	2	.58	2	.58
16	3	2.6	4	4.7	3	1.8	3	.92	2	.60	2	.57
17	3	2.3	3	3.2	4	2.3	1	.31	2	.59	2	.57
18	3	2.1	2	2.0	8	4.9	3	.94	3	.85	4	1.2
19	4	2.9	1	1.0	4	2.3	7	2.2	2	.57	2	.60
20	3	2.2	1	1.1	3	1.4	5	1.5	2	.56	2	.60
21	3	2.2	1	1.2	3	1.4	3	.91	3	.87	4	1.2
22	3	2.1	1	1.2	2	.91	5	1.5	3	.96	3	.81
23	3	2.1	1	1.0	3	1.3	3	.90	2	.59	3	.80
24	3	2.2	1	.97	2	.87	5	1.7	2	.58	2	.53
25	3	2.3	2	1.9	2	.87	4	1.3	2	.66	2	.55
26	3	3.0	2	1.8	2	.81	3	.91	1	.29	2	.58
27	3	3.1	2	1.8	5	1.9	2	.58	2	.58	2	.63
28	2	1.9	2	1.8	4	1.6	3	.87	3	.87	2	.60
29	1	.89	2	1.9	23	12	2	.57	3	.90	2	.52
30	1	.94	1	.92	5	2.3	3	.84	3	.87	1	.26
31	---	---	1	.87	---	---	2	.56	2	.57	---	---
TOTAL	---	103.23	---	63.03	---	56.67	---	38.71	---	20.51	---	19.63

14334700 SOUTH FORK ROGUE RIVER SOUTH OF PROSPECT, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW (CFS)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
23...	1550	--	244	7	4.6	79
24...	1200	--	1430	235	907	29
25...	1200	--	1490	53	213	51
26...	1200	--	3050	316	2600	41
27...	1200	--	1670	93	419	36
28...	1200	--	1180	41	131	48
29...	1200	1100	--	35	104	48
30...	1200	1000	--	20	54	53
DEC						
01...	1320	--	779	14	29	60
03...	1200	1870	--	124	626	37
04...	1200	1590	--	25	107	65
05...	1200	1200	--	23	75	48
07...	1400	--	893	22	53	44
13...	1200	1330	--	125	449	33
14...	1200	4050	--	560	6120	34
14...	1250	--	3630	412	4040	40
15...	1200	4200	--	124	1410	26
15...	2400	4200	--	273	3100	48
16...	1200	2320	--	161	1010	54
16...	2400	2320	--	105	658	35
17...	1200	1860	--	72	362	31
18...	1200	1470	--	34	135	46
JUN						
29...	2400	--	177	79	38	95

1[illegible]335040 LOST CREEK LAKE NEAR MCLEOD, OR

LOCATION.--Lat 42°40'16", long 122°40'25", in SW¼ sec.26, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, in outlet structure of Lost Creek Dam on Rogue River, 1.0 mi (1.6 km) northeast of McLeod and at mile 157.2 (252.9 km).

DRAINAGE AREA.--674 mi² (1,746 km²).

PERIOD OF RECORD.--February 1977 to current year.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam completed in October 1976. Storage began in February 1977. Total capacity, 465,000 acre-ft (573 hm³) between elevations 1,551.0 ft (472.74 m) and 1,872.0 ft (570.59 m), maximum pool elevation. Elevation of gated spillway crest, 1,823.0 ft (555.65 m). Usable storage, 315,000 acre-ft (388 hm³) between elevation 1,751.0 ft (533.70 m) and 1,872.0 ft (570.59 m). Water is used for flood control, recreation, power generation, pollution abatement, domestic use and other purposes.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 464,600 acre-ft (573 hm³) May 12, 1978, elevation, 1,871.90 ft (570.555 m); minimum since first filling, 100,800 acre-ft (124 hm³) Oct. 29, 1977, elevation, 1,720.50 ft (524.408 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 464,600 acre-ft (573 hm³) May 12, elevation, 1,871.90 ft (570.555 m); minimum, 100,800 acre-ft (124 hm³) Oct. 29, elevation, 1,720.50 ft (524.408 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

1,720.0	100,100	1,800.0	254,600
1,750.0	148,200	1,850.0	393,100
		1,872.0	465,000

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1729.30	1720.60	1762.21	1812.98	1825.76	1849.25	1862.53	18[illegible].64	1871.82	1863.21	1839.47	1821.94
2	1729.00	1720.90	1764.51	1812.98	1826.78	1849.83	1862.75	186[illegible]2	1871.84	1862.82	1838.84	1821.45
3	1728.70	1721.10	1767.69	1813.31	1828.38	1850.42	1862.89	1869.66	1871.83	1862.43	1838.23	1820.96
4	1728.40	1721.10	1770.14	1813.64	1828.90	1851.00	1863.01	1869.88	1871.83	1862.02	1837.61	1820.49
5	1728.10	1721.20	1772.83	1814.05	1829.17	1851.59	1863.20	1870.21	1871.84	1861.50	1836.97	1820.08
6	1727.70	1721.40	1775.11	1814.40	1829.93	1852.22	1863.50	1870.32	1871.83	1860.93	1836.33	1819.79
7	1727.50	1721.50	1776.07	1814.71	1831.27	1852.77	1863.98	1870.46	1871.79	1860.37	1835.68	1819.58
8	1727.20	1721.50	1777.79	1815.05	1832.19	1853.47	1864.42	1870.78	1871.67	1859.79	1835.04	1819.45
9	1726.80	1721.50	1779.25	1815.41	1833.07	1854.13	1864.86	1871.07	1871.47	1859.16	1834.36	1819.48
10	1726.50	1721.40	1780.43	1815.69	1834.05	1854.69	1865.34	1871.44	1871.24	1858.53	1833.68	1819.66
11	1726.20	1721.30	1782.08	1816.03	1835.22	1855.18	1865.86	1871.76	1870.96	1857.85	1833.00	1819.78
12	1725.80	1721.20	1783.88	1816.43	1836.28	1855.61	1866.33	1871.86	1870.58	1857.07	1832.33	1819.77
13	1725.60	1721.20	1786.78	1816.77	1837.22	1856.00	1866.68	1871.78	1870.16	1856.25	1831.63	1819.67
14	1725.00	1721.20	1789.81	1817.17	1838.12	1856.33	1867.18	1871.71	1869.75	1855.40	1830.94	1819.48
15	1724.60	1721.50	1791.69	1817.50	1838.98	1856.62	1867.34	1871.75	1869.36	1854.56	1830.35	1819.26
16	1724.20	1722.20	1795.60	1817.86	1839.76	1856.88	1867.50	1871.56	1868.98	1853.73	1829.71	1819.00
17	1723.80	1722.40	1798.45	1818.23	1840.52	1857.20	1867.62	1871.36	1868.60	1852.88	1829.15	1818.78
18	1723.40	1722.70	1800.29	1818.59	1841.29	1857.65	1867.71	1871.21	1868.33	1852.03	1828.52	1818.55
19	1723.00	1722.70	1802.44	1818.96	1842.06	1858.15	1867.84	1871.19	1867.98	1851.19	1827.95	1818.31
20	1722.60	1722.60	1804.18	1819.32	1842.82	1858.65	1868.00	1871.36	1867.62	1850.32	1827.29	1818.08
21	1722.20	1722.90	1805.64	1819.68	1843.59	1859.22	1868.13	1871.54	1867.24	1849.42	1826.73	1817.83
22	1721.80	1724.00	1806.98	1820.02	1844.35	1859.86	1868.32	1871.71	1866.74	1848.62	1826.34	1817.57
23	1721.40	1724.90	1808.29	1820.40	1845.13	1860.54	1868.52	1871.80	1866.41	1847.63	1825.90	1817.31
24	1721.10	1730.50	1809.59	1820.75	1845.89	1860.93	1868.67	1871.82	1866.01	1846.68	1825.51	1817.04
25	1721.20	1738.20	1810.77	1821.11	1846.64	1861.10	1869.00	1871.78	1865.62	1845.77	1824.16	1816.77
26	1721.30	1748.07	1811.85	1821.70	1847.36	1861.25	1869.39	1871.78	1865.17	1844.85	1824.73	1816.48
27	1721.10	1751.67	1812.44	1822.44	1848.04	1861.42	1869.57	1871.79	1864.70	1843.92	1824.28	1816.19
28	1720.80	1754.31	1812.52	1823.13	1848.65	1861.60	1869.60	1871.80	1864.32	1842.97	1823.82	1815.95
29	1720.50	1757.26	1812.68	1823.79	---	1861.80	1869.61	1871.80	1863.93	1842.01	1823.35	1815.67
30	1720.70	1760.00	1812.93	1824.41	---	1861.99	1869.65	1871.80	1863.58	1841.03	1822.88	1815.40
31	1720.70	---	1812.98	1825.00	---	1862.20	---	1871.79	---	1840.15	1822.42	---
MEAN	1724.39	1728.10	1792.84	1818.11	1837.91	1856.76	1866.63	1871.23	1868.77	1853.07	1830.23	1818.66
MAX	1729.30	1760.00	1812.98	1825.00	1848.65	1862.20	1869.65	1871.86	1871.84	1863.21	1839.47	1821.94
MIN	1720.50	1720.60	1762.21	1812.98	1825.76	1849.25	1862.53	1869.62	1863.58	1840.15	1822.42	1815.40
(†)	101,000	166,700	287,600	319,800	388,900	432,100	457,000	464,300	439,000	364,500	313,300	293,900
(‡)	-13,200	+65,700	+120,900	+32,200	+69,100	+43,200	+24,900	+7,300	-25,300	-74,500	-51,200	-19,400

WTR YR 1978 MEAN 1822.11 MAX 1871.86 MIN 1720.50 AC-FT‡ +179,800

† Contents in acre-feet at end of month.
‡ Change in contents, in acre-feet.

14335075 ROGUE RIVER AT MCLEOD, OR

LOCATION.--Lat 42°39'35", long 122°41'30", in SW¼SW¼ sec.34, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 0.3 mi (0.5 km) upstream from mouth of Big Butte Creek, 0.1 (0.2 km) southwest of McLeod, and at mile 155.6 (250.4 km).

DRAINAGE AREA.--690 mi² (1,787 km²), approximately.

PERIOD OF RECORD.--May 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1976 to current year.
pH: November 1976 to current year.
WATER TEMPERATURES: November 1976 to current year.
DISSOLVED OXYGEN: November 1976 to current year.
TURBIDITY: May 1973 to current year.
SUSPENDED SEDIMENT DISCHARGE: October 1976 to current year.

INSTRUMENTATION.--Water-quality monitor and automatic pumping sediment sampler since November 1976.

REMARKS.--Water-discharge records, obtained by subtracting Big Butte Creek near McLeod (station 14337500) from Rogue River near McLeod (station 14337600), are used for computation of daily sediment loads.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 76 micromhos Nov. 11, 1977; minimum, 45 micromhos Dec. 24, 25, 1977.
pH: Maximum, 8.1 units Dec. 10, 1976; minimum, 7.0 units on many days each year.
WATER TEMPERATURES: Maximum, 14.5°C on several days in August and September 1977; minimum, 0.5°C Jan. 9, 1977.
DISSOLVED OXYGEN: Maximum, 15.7 mg/l Jan. 8, 1977; minimum, 6.8 mg/l Aug. 20, 1977.
TURBIDITY: Maximum, 550 JTU Jan. 15, 1974; minimum, 0 JTU on many days each year.
SEDIMENT CONCENTRATIONS: Maximum daily, 73 mg/l Dec. 14, 1977; minimum daily, 1 mg/l many days each year.
SEDIMENT LOADS: Maximum daily, 1,570 tons (1,420 tonnes) Dec. 14, 1977; minimum daily, 1.8 tons (1.6 tonnes) Mar. 1, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 76 micromhos Nov. 11; minimum, 45 micromhos Dec. 24, 25.
pH: Maximum, 7.7 units Oct. 13; minimum, 7.0 units on many days.
WATER TEMPERATURES: Maximum, 14.0°C June 30; minimum, 4.0°C Mar. 1.
DISSOLVED OXYGEN: Maximum, 13.4 mg/l Mar. 13; minimum, 9.0 mg/l Dec. 8.
TURBIDITY: Maximum, 40 JTU Aug. 1, 2; minimum, 0 JTU on many days.
SEDIMENT CONCENTRATIONS: Maximum daily, 73 mg/l Dec. 14; minimum daily, 1 mg/l many days throughout year.
SEDIMENT LOADS: Maximum daily, 1,570 tons (1,420 tonnes) Dec. 14; minimum daily, 2.5 tons (2.3 tonnes) Feb. 27.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	71	63	50	53	54	---	56	---	59	67	63
2	---	71	63	50	54	53	---	55	---	57	59	63
3	67	71	67	50	55	53	---	55	---	57	60	64
4	---	71	60	49	54	52	---	60	---	58	60	64
5	---	72	59	49	55	52	---	56	---	57	60	71
6	---	72	57	49	55	52	55	56	---	58	60	63
7	---	74	57	50	56	52	50	56	---	58	61	63
8	---	75	58	50	56	51	50	56	---	58	60	63
9	---	74	55	50	56	51	51	56	55	58	60	61
10	---	75	55	50	56	50	51	56	55	58	60	62
11	---	76	55	51	---	50	50	56	56	58	61	62
12	64	74	55	51	---	50	52	56	56	59	61	62
13	65	71	56	51	---	49	52	54	56	58	62	61
14	66	72	53	51	---	50	52	54	56	58	63	61
15	66	71	53	50	---	50	53	54	57	58	62	61
16	66	72	55	51	54	50	52	55	57	58	63	---
17	66	71	55	51	54	50	52	54	57	59	63	---
18	68	71	54	51	54	50	53	54	57	58	63	---
19	65	71	56	52	55	50	54	54	57	58	63	---
20	65	72	55	51	55	50	54	54	57	58	63	---
21	66	---	54	51	54	50	54	53	56	58	63	---
22	65	---	52	52	54	51	54	53	56	57	63	---
23	66	72	51	52	54	50	55	55	56	58	63	---
24	66	73	49	52	54	50	60	55	57	58	63	---
25	67	70	49	52	55	50	55	55	57	58	63	---
26	68	72	48	52	54	49	56	58	57	58	63	---
27	71	67	49	52	54	49	56	54	59	59	64	---
28	70	67	49	53	54	49	55	---	57	59	73	64
29	70	66	49	53	---	49	56	---	57	58	63	65
30	70	64	49	53	---	---	56	---	57	59	63	65
31	70	---	50	53	---	---	---	---	---	59	63	---
MEAN	67	71	55	51	55	51	54	55	57	58	62	63

14335075 ROGUE RIVER AT MCLEOD, OR--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.4	7.2	7.3	7.1	7.2	7.1	7.0	7.0	7.3	7.2	7.6	7.1
2	---	---	7.3	7.0	7.2	7.1	7.0	7.0	7.3	7.2	7.4	7.1
3	7.4	7.2	7.3	7.1	7.2	7.1	7.0	7.0	7.3	7.2	7.6	7.1
4	7.4	7.2	7.2	7.1	7.2	7.1	7.0	7.0	7.2	7.2	7.6	7.1
5	7.4	7.2	7.2	7.1	7.2	7.1	7.0	7.0	7.3	7.2	7.3	7.1
6	7.4	7.2	7.3	7.0	7.2	7.1	7.0	7.0	7.3	7.2	7.6	7.1
7	7.5	7.2	7.2	7.0	7.1	7.1	7.0	7.0	7.3	7.2	7.4	7.0
8	7.6	7.3	7.2	7.0	7.2	7.1	7.0	7.0	7.3	7.2	7.2	7.0
9	7.6	7.3	7.2	7.0	7.2	7.1	7.0	7.0	7.3	7.2	7.3	7.1
10	7.6	7.3	7.1	7.0	7.2	7.1	7.0	7.0	7.4	7.2	7.3	7.1
11	7.6	7.3	7.1	7.0	7.1	7.1	7.0	7.0	7.5	7.0	7.3	7.1
12	7.6	7.3	7.1	7.0	7.1	7.1	7.1	7.0	---	---	7.4	7.0
13	7.7	7.3	7.1	7.0	7.2	7.1	7.0	7.0	---	---	7.3	7.2
14	7.6	7.0	7.1	7.0	7.2	7.2	7.0	7.0	---	---	7.4	7.1
15	7.3	7.0	7.2	7.0	7.3	7.2	7.0	7.0	7.4	7.1	7.4	7.1
16	7.3	7.0	7.1	7.0	7.2	7.1	7.0	7.0	7.3	7.1	7.4	7.1
17	7.3	7.0	7.2	7.0	7.2	7.1	7.0	7.0	7.4	7.1	7.5	7.0
18	7.3	7.0	7.2	7.0	7.1	7.1	7.0	7.0	7.4	7.1	7.6	7.0
19	7.3	7.0	7.2	7.1	7.2	7.1	7.0	7.0	7.4	7.1	7.6	7.0
20	7.2	7.0	7.2	7.1	7.1	7.1	7.0	7.0	7.5	7.1	7.6	7.0
21	7.3	7.0	---	---	7.1	7.1	7.0	7.0	7.5	7.1	7.5	7.0
22	7.3	7.1	---	---	7.1	7.0	7.0	7.0	7.5	7.1	7.4	7.0
23	7.2	7.0	7.1	7.1	7.1	7.0	7.0	7.0	7.5	7.1	7.3	7.0
24	7.3	7.0	7.2	7.1	7.1	7.0	7.0	7.0	7.5	7.1	7.2	7.0
25	7.2	7.0	7.2	7.1	7.1	7.0	7.0	7.0	7.6	7.1	7.2	7.0
26	7.3	7.1	7.3	7.1	7.1	7.0	7.1	7.0	7.5	7.1	7.2	7.0
27	7.3	7.1	7.2	7.2	7.0	7.0	7.1	7.0	7.6	7.1	7.2	7.0
28	7.2	7.1	7.2	7.1	7.0	7.0	7.1	7.0	7.6	7.1	7.2	7.0
29	7.2	7.1	7.2	7.1	7.0	7.0	7.1	7.0	---	---	---	---
30	7.2	7.0	7.2	7.1	7.0	7.0	7.3	7.0	---	---	---	---
31	7.3	7.0	---	---	7.0	7.0	7.3	7.2	---	---	---	---
MONTH	7.7	7.0	7.3	7.0	7.3	7.0	7.3	7.0	7.6	7.0	7.6	7.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMHER	
1	---	---	7.4	7.2	---	---	7.3	7.1	7.3	7.0	7.2	7.1
2	---	---	7.4	7.2	---	---	7.3	7.1	7.2	7.0	7.2	7.1
3	---	---	7.4	7.2	---	---	7.3	7.1	7.4	7.0	7.2	7.1
4	---	---	7.4	7.2	---	---	7.3	7.1	7.5	7.1	7.2	7.1
5	---	---	7.5	7.2	---	---	7.3	7.1	7.3	7.1	7.3	7.1
6	7.3	7.0	7.4	7.2	---	---	7.3	7.1	7.3	7.1	7.3	7.1
7	7.3	7.0	7.4	7.2	---	---	7.3	7.1	7.5	7.1	7.2	7.1
8	7.3	7.0	7.5	7.2	---	---	7.3	7.1	7.5	7.3	7.2	7.0
9	7.3	7.0	7.4	7.2	7.4	7.2	7.3	7.1	7.5	7.1	7.1	7.0
10	7.3	7.0	7.4	7.2	7.4	7.2	7.3	7.1	7.5	7.0	7.1	7.0
11	7.3	7.1	7.4	7.2	7.4	7.2	7.3	7.1	7.3	7.0	7.1	7.0
12	7.4	7.0	7.4	7.2	7.4	7.2	7.3	7.1	7.2	7.1	7.1	7.0
13	7.3	7.0	7.4	7.2	7.4	7.2	7.3	7.1	7.2	7.1	7.1	7.0
14	7.3	7.1	7.3	7.2	7.4	7.2	7.3	7.1	7.3	7.1	7.1	7.0
15	7.2	7.0	7.3	7.2	7.4	7.2	7.3	7.1	7.3	7.2	7.1	7.0
16	7.2	7.0	7.4	7.2	7.4	7.2	7.3	7.1	7.3	7.2	---	---
17	7.3	7.1	7.4	7.2	7.4	7.2	7.2	7.1	7.6	7.2	---	---
18	7.2	7.1	7.4	7.2	7.4	7.2	7.3	7.1	7.6	7.2	---	---
19	7.2	7.1	7.4	7.2	7.4	7.2	7.2	7.1	7.5	7.2	---	---
20	7.2	7.0	7.4	7.2	7.3	7.1	7.2	7.1	7.3	7.2	---	---
21	7.3	7.1	7.4	7.2	7.2	7.0	7.1	7.0	7.3	7.2	---	---
22	7.2	7.0	7.4	7.0	7.3	7.1	7.1	7.0	7.5	7.1	---	---
23	7.2	7.1	7.2	7.0	7.2	7.1	7.1	7.0	7.3	7.1	---	---
24	7.4	7.1	7.2	7.0	7.2	7.1	7.1	7.0	7.5	7.1	---	---
25	7.4	7.3	7.2	7.0	7.3	7.1	7.1	7.0	7.5	7.1	---	---
26	7.4	7.2	7.2	7.1	7.3	7.1	7.1	7.0	7.2	7.1	---	---
27	7.4	7.2	---	---	7.3	7.0	7.1	7.0	7.2	7.1	---	---
28	7.3	7.2	---	---	7.3	7.1	7.1	7.0	7.2	7.1	7.2	7.0
29	7.4	7.2	---	---	7.3	7.1	7.1	7.0	7.2	7.1	7.2	7.0
30	7.4	7.2	---	---	7.4	7.1	7.1	7.0	7.2	7.1	7.2	7.0
31	---	---	---	---	---	---	7.1	7.0	7.2	7.1	---	---
MONTH	7.4	7.0	7.5	7.0	7.4	7.0	7.3	7.0	7.6	7.0	7.3	7.0

14335075 ROGUE RIVER AT MCLEOD, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	10.5	10.5	10.0	6.0	5.5	5.5	5.0	6.0	5.5	5.5	4.0
2	---	---	10.5	9.5	6.5	6.0	5.5	5.0	6.0	5.5	5.0	4.5
3	---	---	10.0	9.5	6.5	6.0	5.5	5.0	6.0	5.0	5.5	4.5
4	11.5	10.5	9.5	9.5	6.0	6.0	5.5	5.0	5.5	5.0	5.5	4.5
5	11.5	10.0	9.5	9.5	6.5	6.0	5.0	5.0	5.5	5.0	5.0	4.5
6	11.0	10.5	10.0	9.5	6.0	5.5	5.5	5.0	5.5	5.0	5.5	4.5
7	12.0	10.5	9.5	9.0	6.5	6.0	5.0	5.0	5.5	5.0	5.0	4.5
8	12.0	11.5	9.5	9.0	7.0	5.5	5.5	5.0	5.5	5.0	5.0	4.5
9	12.0	11.5	9.5	9.0	6.0	5.5	5.0	5.0	5.5	5.0	5.5	4.5
10	12.0	11.0	9.5	9.0	6.0	5.5	5.5	5.0	5.5	5.0	5.0	4.5
11	12.0	11.0	9.5	8.5	5.5	5.5	5.5	4.5	---	---	5.5	5.0
12	12.0	11.0	9.5	9.0	5.5	5.0	5.5	4.5	---	---	5.5	4.5
13	12.0	11.0	9.0	9.0	5.5	5.5	5.5	4.5	---	---	5.5	5.0
14	11.5	11.0	9.0	8.5	---	---	5.5	5.0	---	---	5.5	4.5
15	11.5	11.0	9.0	8.5	6.0	5.5	5.5	5.0	---	---	5.5	4.5
16	11.5	11.0	9.0	8.5	6.0	5.5	6.5	5.0	5.0	4.5	5.5	4.5
17	11.5	11.0	9.0	8.0	6.0	6.0	6.5	6.0	5.0	4.5	5.5	4.5
18	11.5	10.5	8.5	8.0	6.0	6.0	6.5	6.0	5.5	4.5	6.0	5.0
19	11.5	10.5	8.5	8.0	6.0	6.0	6.5	6.0	5.5	4.5	6.0	5.0
20	11.0	10.5	8.5	7.5	6.0	5.5	6.5	6.0	5.5	4.5	6.0	4.5
21	11.5	10.5	---	---	6.0	5.5	6.5	6.0	5.5	4.5	6.0	5.0
22	11.0	10.5	---	---	6.0	5.5	6.5	6.0	5.5	4.5	5.5	5.0
23	11.0	10.5	7.5	7.5	6.0	5.0	6.5	6.0	5.0	4.5	5.5	5.0
24	11.0	10.5	7.0	7.0	5.5	5.0	6.5	6.0	5.5	4.5	5.5	5.0
25	11.0	10.5	7.0	6.5	5.5	5.0	6.5	6.0	5.5	4.5	5.5	5.0
26	11.0	10.5	6.5	6.0	5.5	5.0	6.5	6.0	5.0	4.5	5.5	5.0
27	10.5	10.0	6.0	6.0	5.5	5.0	6.5	6.0	5.5	4.5	6.0	5.0
28	10.5	10.0	6.0	5.5	5.5	5.0	6.5	6.0	6.0	4.5	6.0	5.5
29	10.5	10.0	6.0	5.5	5.5	5.0	6.5	6.0	---	---	---	---
30	10.5	10.0	6.0	5.5	5.5	5.0	6.5	5.5	---	---	---	---
31	10.5	10.0	---	---	5.5	5.0	6.0	5.5	---	---	---	---
MONTH	12.0	10.0	10.5	5.5	7.0	5.0	6.5	4.5	6.0	4.5	6.0	4.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	8.0	7.0	---	---	13.0	12.0	10.5	9.0	13.5	12.5
2	---	---	8.0	7.5	---	---	12.5	12.0	10.5	9.5	13.5	12.5
3	---	---	8.5	7.0	---	---	12.5	11.5	10.5	9.5	13.5	12.5
4	---	---	8.5	7.0	---	---	13.0	12.0	11.0	9.5	12.5	12.5
5	---	---	8.5	7.0	---	---	13.0	12.0	11.0	9.5	12.5	12.5
6	---	---	8.5	7.0	---	---	13.5	12.5	11.0	10.0	13.0	12.5
7	6.0	5.5	8.5	7.5	---	---	13.0	12.0	11.5	10.0	12.5	12.5
8	6.5	5.0	9.0	7.5	---	---	13.0	12.0	11.0	10.0	12.5	10.0
9	6.5	5.5	9.0	7.5	---	---	13.0	11.5	11.0	10.0	10.0	9.5
10	8.0	5.5	8.5	7.5	10.0	9.5	13.0	12.0	10.5	9.5	10.0	9.5
11	8.0	7.0	8.5	7.5	10.5	9.5	12.5	11.5	12.0	10.0	10.5	9.5
12	8.0	6.5	8.5	8.0	10.5	9.5	13.0	12.0	12.0	11.5	10.5	9.5
13	8.0	6.5	8.5	8.0	10.0	9.5	13.0	11.5	12.5	11.5	10.0	10.0
14	8.0	7.0	8.0	8.0	10.0	9.5	13.0	11.5	12.5	11.5	11.0	10.0
15	7.5	7.0	8.5	7.0	10.5	9.5	12.5	11.5	12.5	12.0	---	---
16	7.5	6.5	8.5	8.0	10.5	9.5	12.0	11.5	12.5	12.0	---	---
17	8.0	7.0	9.0	7.5	11.0	10.0	12.0	11.5	13.0	12.0	---	---
18	8.0	7.0	9.5	7.5	11.0	10.0	12.5	11.5	13.0	12.0	---	---
19	7.5	7.0	9.5	8.5	11.0	10.0	12.5	11.5	13.0	12.0	---	---
20	7.5	7.0	9.5	8.5	11.0	10.0	12.0	11.0	12.5	12.0	---	---
21	8.0	7.0	9.5	8.0	11.0	10.0	11.5	9.0	12.5	12.0	---	---
22	8.0	7.0	9.0	7.5	11.0	10.0	10.0	9.0	13.0	12.0	---	---
23	8.0	7.5	9.0	7.5	11.0	10.0	10.0	8.5	13.0	12.0	---	---
24	8.0	7.5	8.5	8.0	11.0	10.5	10.5	8.5	12.5	12.0	---	---
25	7.5	7.5	9.0	8.0	11.0	10.5	10.0	9.0	13.0	12.0	---	---
26	7.5	7.0	9.0	8.5	11.5	10.5	10.5	9.0	13.0	12.0	---	---
27	8.0	7.5	---	---	11.5	10.5	10.5	9.0	13.0	12.5	---	---
28	8.0	7.0	---	---	11.5	10.5	10.5	9.5	13.0	12.5	---	---
29	8.0	7.0	---	---	12.0	11.0	10.5	9.0	13.0	12.5	10.5	9.5
30	8.0	7.0	---	---	14.0	11.5	11.0	9.5	13.0	12.5	10.5	9.5
31	---	---	---	---	---	---	10.5	9.0	13.0	12.0	---	---
MONTH	8.0	5.0	9.5	7.0	14.0	9.5	13.5	8.5	13.0	9.0	13.5	9.5

14335075 ROGUE RIVER AT MCLEOD, OR—Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	10.7	9.9	10.3	11.0	10.3	10.5	12.9	12.1	12.6	12.7	12.3	12.5
2	---	---	---	11.1	10.3	10.6	12.9	12.3	12.6	12.5	12.2	12.4
3	---	---	---	11.1	10.5	10.7	13.3	11.0	12.2	12.5	11.6	12.0
4	9.6	9.2	9.4	11.1	10.5	10.7	11.7	10.3	10.9	11.8	11.5	11.7
5	10.1	9.4	9.6	11.1	10.6	10.8	11.3	10.4	10.8	11.8	11.7	11.8
6	10.1	9.5	9.8	11.3	10.6	10.9	11.8	10.1	11.1	12.0	11.9	11.9
7	10.5	9.8	10.0	11.2	10.6	10.9	---	---	---	12.0	11.9	11.9
8	10.7	10.0	10.3	11.2	10.6	10.9	12.9	9.0	11.3	12.0	11.8	11.9
9	10.9	10.3	10.6	11.2	10.7	10.9	12.0	11.1	11.5	12.0	11.9	11.9
10	11.1	10.5	10.8	11.1	10.4	10.6	11.8	11.3	11.5	12.1	12.0	12.1
11	11.3	10.6	10.9	10.9	10.4	10.5	12.0	11.7	11.8	12.2	12.0	12.1
12	11.2	10.6	10.8	10.9	10.3	10.5	12.4	12.0	12.2	12.3	12.0	12.2
13	11.2	10.4	10.8	10.9	10.4	10.5	13.2	12.3	12.8	12.3	12.0	12.1
14	11.2	9.5	10.3	10.8	10.4	10.5	---	---	---	12.1	11.8	12.0
15	10.2	9.4	9.7	10.9	10.5	10.6	---	---	---	12.7	11.9	12.1
16	10.3	9.3	9.8	10.9	10.4	10.6	---	---	---	12.8	12.6	12.7
17	10.4	9.6	9.9	11.0	10.5	10.7	---	---	---	13.0	12.7	12.9
18	10.5	9.7	9.9	11.0	10.6	10.7	---	---	---	13.0	12.8	12.8
19	10.6	9.6	10.0	11.0	10.6	10.8	---	---	---	12.9	12.3	12.8
20	10.5	9.7	9.9	11.1	10.7	10.8	---	---	---	13.1	12.8	12.9
21	10.6	9.8	10.0	---	---	---	11.6	11.4	11.5	13.0	12.8	12.9
22	10.7	9.7	10.1	---	---	---	11.6	11.4	11.5	13.1	12.3	12.8
23	10.4	9.7	10.0	11.9	11.5	11.6	11.8	11.5	11.6	12.4	12.2	12.3
24	10.5	9.7	10.0	12.7	12.4	12.5	11.9	11.7	11.8	12.4	12.2	12.3
25	10.5	9.8	10.0	---	---	---	11.9	11.7	11.8	12.4	12.1	12.3
26	10.7	9.9	10.1	---	---	---	11.9	11.7	11.8	12.4	12.1	12.3
27	10.5	9.7	10.0	11.9	11.4	11.7	12.5	11.6	12.1	12.4	12.1	12.2
28	10.3	9.8	10.0	12.3	11.7	12.0	12.7	12.5	12.5	12.4	12.1	12.2
29	10.6	10.0	10.2	12.5	12.1	12.3	12.6	12.4	12.5	12.5	12.1	12.2
30	10.6	9.9	10.2	12.7	12.2	12.5	12.7	12.5	12.6	12.4	11.9	12.1
31	10.9	10.0	10.4	---	---	---	12.7	12.5	12.6	12.2	11.9	12.0
MONTH	11.3	9.2	10.1	12.7	10.3	11.0	13.3	9.0	11.9	13.1	11.5	12.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	12.8	11.8	12.2	12.5	10.0	11.3	---	---	---	11.6	11.3	11.4
2	13.1	11.7	12.1	12.2	11.5	11.7	---	---	---	11.6	11.2	11.4
3	13.0	11.7	12.4	12.4	11.4	11.7	---	---	---	11.5	11.1	11.3
4	12.9	12.7	12.8	12.2	11.2	11.6	---	---	---	11.5	11.0	11.2
5	12.7	12.6	12.7	12.0	11.3	11.5	---	---	---	11.8	10.7	11.3
6	12.7	11.6	12.2	12.2	11.2	11.6	---	---	---	11.1	10.6	10.9
7	11.9	11.5	11.7	11.9	11.2	11.4	12.2	11.6	11.8	10.8	10.5	10.7
8	11.9	11.6	11.8	11.6	11.1	11.3	12.3	11.6	11.9	11.8	10.7	11.3
9	12.0	11.5	11.7	11.7	11.1	11.4	12.3	11.6	11.9	11.2	10.6	11.0
10	11.9	11.4	11.6	11.6	11.0	11.2	12.3	11.3	11.7	11.4	10.4	10.8
11	11.9	11.4	11.6	11.6	11.0	11.2	12.1	11.3	11.6	10.7	10.3	10.5
12	---	---	---	11.6	10.9	11.2	12.0	11.2	11.6	10.6	10.3	10.5
13	---	---	---	13.4	10.9	11.3	11.9	11.2	11.5	10.6	10.3	10.4
14	---	---	---	11.8	11.2	11.4	11.7	11.2	11.4	10.5	10.2	10.3
15	12.0	11.3	11.6	11.9	11.2	11.5	11.6	11.2	11.4	10.5	10.2	10.4
16	11.8	11.3	11.5	12.0	11.3	11.6	11.6	11.2	11.4	10.5	10.2	10.3
17	11.9	11.2	11.5	12.2	11.4	11.7	11.6	11.2	11.4	10.4	9.9	10.2
18	12.0	11.2	11.5	12.3	11.4	11.8	11.5	11.0	11.3	10.2	9.9	10.1
19	11.9	11.1	11.4	12.5	11.5	12.0	11.2	10.9	11.1	10.0	9.7	9.9
20	11.8	11.0	11.3	12.9	12.4	12.6	11.5	11.1	11.3	10.0	9.6	9.8
21	11.8	11.0	11.3	13.0	12.5	12.7	11.5	11.2	11.3	10.0	9.6	9.8
22	11.8	11.0	11.3	13.0	11.6	12.4	11.4	11.1	11.3	10.4	9.6	10.0
23	11.8	11.0	11.3	12.4	11.7	12.0	11.3	10.9	11.1	10.3	9.8	10.1
24	11.9	11.2	11.4	12.4	11.9	12.1	11.6	10.9	11.3	10.2	9.8	10.0
25	12.2	11.3	11.6	12.4	11.8	12.1	11.5	11.2	11.3	10.2	9.7	10.0
26	12.3	11.4	11.7	12.4	11.9	12.1	11.6	11.2	11.4	10.3	10.0	10.2
27	12.3	11.5	11.8	12.3	11.8	12.1	11.6	11.3	11.4	---	---	---
28	---	---	---	12.4	11.8	12.1	11.6	11.3	11.4	---	---	---
29	---	---	---	---	---	---	11.6	11.2	11.4	---	---	---
30	---	---	---	---	---	---	11.6	11.3	11.4	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	13.1	11.0	11.8	13.4	10.0	11.7	12.3	10.9	11.4	11.8	9.6	10.5

14335075 ROGUE RIVER AT MCLEOD, OR--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	10.4	9.7	9.9	11.3	10.7	10.9	9.9	9.5	9.7
2	---	---	---	10.2	9.7	9.9	11.3	10.3	10.8	10.0	9.5	9.7
3	---	---	---	10.3	9.8	10.0	11.2	10.4	10.7	9.9	9.3	9.6
4	---	---	---	10.3	9.9	10.1	11.4	10.7	11.0	9.6	9.2	9.5
5	---	---	---	10.3	9.8	10.0	11.1	10.8	11.0	9.7	9.2	9.4
6	---	---	---	10.1	9.7	9.9	11.2	10.7	11.0	9.7	9.2	9.5
7	---	---	---	10.2	9.7	10.0	11.5	10.8	11.2	9.7	9.3	9.4
8	---	---	---	10.1	9.8	10.0	11.6	11.2	11.4	10.0	9.3	9.6
9	11.0	10.7	10.9	10.0	9.6	9.9	11.4	10.6	11.1	9.9	9.6	9.7
10	11.1	10.8	11.0	9.9	9.5	9.7	11.2	10.1	10.7	10.1	9.7	9.9
11	11.0	10.8	10.9	9.9	9.5	9.7	11.3	9.7	10.2	10.2	9.7	9.9
12	11.0	10.9	11.0	10.0	9.5	9.7	10.1	9.6	9.8	10.2	9.7	9.9
13	11.0	10.9	10.9	10.0	9.7	9.9	10.0	9.7	9.8	10.0	9.6	9.8
14	11.0	10.7	10.8	10.1	9.8	9.9	10.5	9.8	10.2	10.0	9.6	9.8
15	10.9	10.6	10.8	10.3	9.9	10.1	10.4	10.1	10.3	---	---	---
16	10.9	10.5	10.7	10.4	10.0	10.2	10.6	10.2	10.4	---	---	---
17	10.6	10.4	10.5	10.4	10.1	10.2	10.9	10.3	10.5	---	---	---
18	10.7	10.4	10.5	10.4	10.1	10.2	10.9	10.3	10.8	---	---	---
19	10.6	10.4	10.6	10.3	10.0	10.2	10.7	10.2	10.4	---	---	---
20	10.7	10.3	10.6	10.4	10.0	10.2	10.3	9.9	10.1	---	---	---
21	11.2	10.4	11.0	10.6	10.0	10.3	10.5	9.7	10.0	---	---	---
22	11.3	11.1	11.2	10.6	10.3	10.4	10.4	9.4	9.8	---	---	---
23	11.4	11.2	11.3	10.4	10.1	10.3	9.8	9.4	9.6	---	---	---
24	11.4	11.1	11.3	10.3	9.9	10.1	10.3	9.3	9.7	---	---	---
25	11.3	11.1	11.2	10.1	9.8	10.0	10.3	9.5	9.7	---	---	---
26	11.2	10.9	11.0	10.0	9.7	9.8	9.8	9.4	9.6	---	---	---
27	11.1	10.1	10.9	9.9	9.5	9.7	9.9	9.5	9.7	---	---	---
28	10.5	10.0	10.2	9.8	9.5	9.7	9.9	9.5	9.7	10.4	9.7	10.1
29	10.3	9.9	10.1	10.5	9.5	9.8	9.8	9.5	9.7	10.4	9.8	10.1
30	10.1	9.4	9.8	10.7	10.4	10.6	9.9	9.5	9.6	10.6	10.0	10.2
31	---	---	---	11.0	10.6	10.8	9.9	9.5	9.7	---	---	---
MONTH	11.4	9.4	10.8	11.0	9.5	10.0	11.6	9.3	10.3	10.6	9.2	9.8

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	1	1	1	8	7	7	5	5	5
2	---	---	---	1	1	1	8	6	7	5	5	5
3	---	---	---	1	0	1	---	---	---	5	5	5
4	1	1	1	1	0	1	---	---	---	5	4	5
5	1	1	1	1	0	1	---	---	---	5	5	5
6	1	1	1	1	1	1	---	---	---	5	4	5
7	1	1	1	1	1	1	7	1	4	4	4	4
8	1	1	1	1	1	1	8	4	6	5	4	4
9	1	0	1	1	1	1	6	5	6	4	4	4
10	1	1	1	2	1	1	6	5	5	4	4	4
11	1	1	1	2	1	1	6	5	5	4	4	4
12	1	1	1	2	1	1	6	3	5	4	3	4
13	1	1	1	2	1	2	---	---	---	4	3	4
14	1	1	1	2	1	2	---	---	---	4	4	4
15	1	1	1	2	2	2	10	0	3	4	4	4
16	1	1	1	2	1	2	3	2	3	4	4	4
17	1	1	1	2	1	1	4	3	3	4	3	4
18	1	1	1	2	1	1	4	4	4	3	3	3
19	1	1	1	2	1	1	4	4	4	3	3	3
20	1	1	1	2	1	1	6	4	4	4	3	3
21	1	1	1	---	---	---	6	6	6	3	3	3
22	1	0	1	---	---	---	9	6	7	3	3	3
23	1	1	1	3	2	2	9	6	8	3	3	3
24	1	1	1	7	3	5	9	7	8	3	3	3
25	1	1	1	3	2	2	9	7	8	3	3	3
26	1	1	1	8	2	3	8	7	7	4	3	3
27	1	1	1	4	2	3	7	6	7	3	3	3
28	1	1	1	---	---	---	7	6	6	3	3	3
29	1	1	1	7	6	7	7	6	6	3	3	3
30	1	1	1	8	6	7	6	6	6	3	3	3
31	1	1	1	---	---	---	6	5	5	3	3	3
MONTH	1	0	1	8	0	2	10	0	6	5	3	4

14335075 ROGUE RIVER AT MCLEOD, OR—Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4	3	3	---	---	---	---	---	---	2	1	2
2	5	3	3	3	2	2	---	---	---	3	1	1
3	7	3	4	3	2	3	---	---	---	2	1	1
4	3	3	3	3	2	3	---	---	---	2	1	1
5	3	3	3	3	2	2	---	---	---	2	1	1
6	3	2	3	3	2	2	---	---	---	2	1	1
7	4	2	3	3	2	2	2	2	2	2	1	1
8	3	2	2	3	2	3	2	2	2	2	1	1
9	3	2	2	3	2	3	2	2	2	2	1	2
10	3	2	2	3	2	2	2	2	2	2	1	1
11	---	---	---	3	2	2	2	2	2	2	1	1
12	---	---	---	3	2	2	2	2	2	1	1	1
13	---	---	---	2	2	2	2	2	2	2	1	1
14	---	---	---	2	2	2	2	2	2	1	1	1
15	---	---	---	2	1	2	2	2	2	1	1	1
16	3	2	2	2	1	2	2	2	2	1	1	1
17	2	2	2	2	2	2	2	2	2	1	1	1
18	2	2	2	2	2	2	4	2	2	1	1	1
19	2	2	2	3	2	2	2	2	2	2	1	1
20	2	2	2	2	2	2	3	2	2	2	1	1
21	2	2	2	2	2	2	3	2	2	2	1	1
22	2	2	2	3	2	2	2	2	2	2	1	1
23	2	2	2	2	2	2	2	2	2	1	1	1
24	2	2	2	2	2	2	4	2	2	1	1	1
25	2	2	2	2	1	2	2	1	1	1	1	1
26	2	2	2	2	2	2	2	1	1	1	1	1
27	2	2	2	2	2	2	2	1	1	1	1	1
28	---	---	---	2	2	2	3	1	2	---	---	---
29	---	---	---	---	---	---	2	1	1	---	---	---
30	---	---	---	---	---	---	1	1	1	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	7	2	2	3	1	2	4	1	2	3	1	1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	2	1	1	40	1	3	1	1	1
2	---	---	---	1	1	1	40	1	7	2	1	1
3	---	---	---	1	1	1	3	1	2	2	1	1
4	---	---	---	1	1	1	3	1	1	2	1	1
5	---	---	---	2	1	1	2	1	1	1	1	1
6	---	---	---	2	1	1	2	1	1	1	1	1
7	---	---	---	2	1	1	2	1	2	1	1	1
8	---	---	---	2	1	1	2	1	2	1	1	1
9	2	1	1	2	1	1	2	1	2	1	1	1
10	2	0	1	2	1	1	2	1	1	1	1	1
11	15	0	1	2	1	1	2	1	1	1	1	1
12	2	0	0	2	1	1	1	1	1	1	1	1
13	1	0	0	2	1	2	1	1	1	1	1	1
14	3	1	2	2	2	2	1	1	1	1	0	1
15	3	2	2	2	2	2	1	1	1	1	1	1
16	3	2	2	2	1	1	1	1	1	---	---	---
17	3	2	2	2	1	2	1	1	1	---	---	---
18	3	0	2	2	1	2	1	1	1	---	---	---
19	25	0	2	2	1	2	1	1	1	---	---	---
20	2	0	1	2	1	1	1	1	1	---	---	---
21	2	1	1	2	1	2	1	1	1	---	---	---
22	1	1	1	2	1	1	1	1	1	---	---	---
23	1	1	1	2	1	2	1	1	1	---	---	---
24	1	1	1	2	1	2	1	1	1	---	---	---
25	1	1	1	2	1	2	1	1	1	---	---	---
26	1	1	1	2	2	2	1	1	1	---	---	---
27	2	1	1	2	1	1	1	1	1	---	---	---
28	2	1	1	2	1	1	1	1	1	1	1	1
29	1	1	1	2	1	1	2	1	1	1	1	1
30	1	1	1	2	1	2	2	1	1	1	1	1
31	---	---	---	2	1	2	1	1	1	---	---	---
MONTH	25	0	1	2	1	1	40	1	1	2	0	1

14335075 ROGUE RIVER AT MCLEOD, OR--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	1120	4	12	1070	3	8.7	1140	11	34
2	1120	4	12	1000	3	8.1	1080	10	30
3	1100	4	12	1010	2	5.5	1500	14	56
4	1090	4	12	990	2	5.3	3420	16	146
5	1100	4	12	997	3	8.1	1460	15	59
6	1100	4	12	1010	3	8.2	1070	10	29
7	1100	3	8.9	1010	3	8.2	2250	27	266
8	1100	3	8.9	1010	3	8.2	1040	12	34
9	1090	4	12	1010	3	8.2	1020	11	31
10	1110	4	12	1000	3	8.1	1020	12	34
11	1110	3	8.9	991	3	8.0	1010	9	24
12	1110	3	9.0	1010	4	11	1050	8	22
13	1110	3	9.0	999	4	11	2230	17	82
14	1120	4	12	1000	4	11	8280	74	1600
15	1120	4	12	996	4	11	10100	62	1860
16	1120	3	9.1	1000	3	8.1	3970	12	153
17	1100	3	8.9	1010	3	8.2	2380	10	74
18	1110	6	18	1010	3	8.2	1140	11	40
19	1110	6	18	1010	3	8.2	1050	10	28
20	1100	7	21	1010	4	11	1060	8	22
21	1100	7	21	939	4	10	1120	9	26
22	1100	8	24	820	6	13	1070	8	22
23	1110	8	24	1220	6	19	1060	10	28
24	1110	9	27	720	12	23	1070	10	28
25	1110	9	27	1230	7	23	1060	12	34
26	1130	4	12	1000	9	24	1060	9	26
27	1130	4	12	2520	9	60	1830	10	49
28	1120	2	6.0	2420	9	58	2590	9	62
29	1110	2	6.0	1290	10	35	2570	9	62
30	1140	3	9.2	1160	10	31	2610	8	55
31	1130	3	9.2	---	---	---	2600	9	62
TOTAL	34430	---	417.1	33462	---	468.3	65910	---	5078

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	2480	8	53	911	2	5.0	903	3	7.4
2	2450	6	39	826	3	6.6	896	3	7.3
3	2030	6	33	1960	4	21	902	4	9.8
4	1890	7	36	2780	3	20	902	5	12
5	1910	7	36	2750	3	21	904	5	12
6	2010	7	38	2060	2	11	926	8	20
7	1900	6	31	1700	2	8.9	1020	6	17
8	1800	8	39	2220	2	12	1330	5	18
9	2000	6	32	1890	4	20	1410	4	15
10	2240	5	30	1350	3	10	1400	3	11
11	2000	7	38	874	4	8.8	1390	3	11
12	1850	4	20	859	3	6.6	1390	4	15
13	2020	4	22	886	3	6.9	1390	3	11
14	2000	9	49	863	3	6.8	1390	4	15
15	2220	4	24	879	5	11	1320	3	11
16	2420	5	33	882	3	7.0	1270	3	10
17	2530	6	41	883	3	7.0	1210	3	10
18	2410	7	45	870	2	4.6	1080	2	5.8
19	2330	9	57	849	3	6.8	1080	3	8.7
20	2280	5	31	844	4	9.0	1080	3	8.7
21	2230	5	30	895	2	4.8	1100	3	8.9
22	2180	5	29	929	3	7.5	1150	2	6.2
23	1910	5	26	925	2	5.0	1220	3	9.9
24	1820	3	15	912	2	4.9	1570	3	13
25	1720	3	14	916	2	4.9	1850	3	15
26	1360	3	11	926	1	2.5	1840	2	9.9
27	1050	3	8.6	918	1	2.5	1850	2	10
28	1050	2	5.8	914	2	5.0	1830	1	4.9
29	1040	2	5.1	---	---	---	1830	2	9.9
30	1030	1	2.8	---	---	---	1830	3	15
31	1040	2	5.7	---	---	---	1830	3	15
TOTAL	59200	---	880.0	34471	---	247.1	41093	---	353.4

14335075 ROGUE RIVER AT MCLEOD, OR—Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	1830	3	15	1980	3	16	1660	1	4.5
2	1850	2	10	1940	3	16	1690	1	4.6
3	1850	3	15	1780	2	9.6	1740	1	4.7
4	1850	3	15	1600	3	13	1720	1	4.6
5	1880	3	15	1260	2	6.8	1730	1	4.7
6	1530	3	12	1590	2	8.6	1770	1	4.8
7	1140	3	9.2	1570	1	4.2	1800	1	4.9
8	1130	3	9.2	1270	3	10	1880	1	5.1
9	1130	3	9.2	1390	2	7.5	1990	2	11
10	1120	3	9.1	1260	2	6.8	2100	3	17
11	1120	3	9.1	1440	2	7.8	2210	2	12
12	1120	4	12	1710	3	14	2240	2	12
13	1120	2	6.0	1990	3	16	2260	2	12
14	1170	4	13	2010	3	16	2190	2	12
15	1530	3	12	2220	2	12	2110	2	11
16	1520	3	12	2320	3	19	2040	2	11
17	1510	4	16	2320	2	13	2050	2	11
18	1520	4	16	2240	2	12	2060	3	17
19	1510	2	8.2	1920	2	10	2050	0	.00
20	1410	5	19	1710	1	4.6	2040	2	11
21	1320	8	29	1700	1	4.6	2050	2	11
22	1500	3	12	1700	5	23	2050	2	11
23	1460	3	12	1750	2	9.5	2050	2	11
24	1370	3	11	1890	2	10	2050	2	11
25	1500	2	8.1	1930	2	10	2050	2	11
26	1530	3	12	1780	2	9.6	2090	2	11
27	1820	4	20	1750	3	14	2090	2	11
28	2000	3	16	1760	4	19	2040	2	11
29	1980	3	16	1770	2	9.6	2010	2	11
30	1980	2	11	1720	1	4.6	1940	2	10
31	---	---	---	1720	1	4.6	---	---	---
TOTAL	45300	---	389.1	54990	---	341.4	54750	---	283.90

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	1970	2	11	2060	2	11	1620	3	13
2	1990	2	11	1900	3	15	1630	5	22
3	2000	3	16	1900	6	31	1620	4	17
4	2000	1	5.4	1900	3	15	1630	5	22
5	2090	3	17	1940	3	16	1630	3	13
6	2190	2	12	1930	3	16	1530	4	17
7	2190	3	18	1910	3	15	1380	3	11
8	2180	5	29	1910	4	21	1230	5	17
9	2190	2	12	1950	4	21	1120	5	15
10	2200	3	18	1950	4	21	1130	4	12
11	2280	3	18	1940	2	10	1130	4	12
12	2430	2	13	1940	4	21	1140	3	9.2
13	2520	2	14	1950	3	16	1210	3	9.8
14	2530	2	14	1950	2	11	1350	3	11
15	2550	2	14	1930	2	10	1350	3	11
16	2550	3	21	1930	3	16	1350	4	15
17	2530	3	20	1800	2	9.7	1340	5	18
18	2510	2	14	1830	2	9.9	1350	4	15
19	2480	3	20	1770	4	19	1350	4	15
20	2500	3	20	1890	2	10	1340	4	14
21	2540	2	14	1810	3	15	1350	5	18
22	2570	3	21	1600	3	13	1340	6	22
23	2560	2	14	1630	2	8.8	1340	6	22
24	2540	2	14	1590	2	8.6	1340	5	18
25	2540	4	27	1620	2	8.7	1340	7	25
26	2530	3	20	1620	2	8.7	1350	5	18
27	2540	3	21	1620	5	22	1350	11	40
28	2540	3	21	1630	5	22	1300	9	32
29	2540	3	21	1630	6	26	1330	13	47
30	2540	2	14	1620	6	26	1330	17	61
31	2370	3	19	1620	4	17	---	---	---
TOTAL	73690	---	523.4	56270	---	490.4	40800	---	592.0

14335075 ROGUE RIVER AT MCLEOD, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC					
07...	1200	3410	106	976	74
14...	1010	7770	126	2640	40
14...	1022	8220	111	2460	38
14...	1030	8220	85	1890	42
14...	1045	8220	84	1860	40
14...	1100	8770	76	1800	42
14...	1200	7670	63	1310	49
14...	1300	8560	59	1360	47

14335500 SOUTH FORK BIG BUTTE CREEK NEAR BUTTE FALLS, OR

LOCATION.--Lat 42°32'25", long 122°33'15", in NE¼SW¼ sec.11, T.35 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on right bank 10 ft (3 m) downstream from Ginger Creek, 0.6 mi (1.0 km) east of town of Butte Falls, and at mile 14.0 (22.5 km).

DRAINAGE AREA.--138 mi² (357 km²).

PERIOD OF RECORD.--September 1910 to October 1911 (published as "at Butte Falls"), August to October 1915, October 1917 to September 1922, March 1925 to current year. Monthly discharge only August, September 1915, published in WSP 1318.

REVISED RECORDS.--WSP 1288: 1911, 1918-19, 1921-22, 1929. WSP 1318: 1918-19. WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Oct. 1, 1968. Altitude of gage is 2,360 ft (719 m), from river-profile map. Sept. 21, 1910, to Sept. 30, 1922, nonrecording gage at site 300 ft (91 m) upstream at different datums.

REMARKS.--Records good. Flow slightly regulated since 1952 by Willow Creek Reservoir, capacity, 7,320 acre-ft (9.03 hm³). Diversions for irrigation above station and for municipal water supply for Medford (since 1927) and Butte Falls.

AVERAGE DISCHARGE.--59 years (water years 1911, 1918-22, 1926-78), 158 ft³/s (4.475 m³/s), 114,500 acre-ft/yr (141 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft³/s (357 m³/s) Dec. 22, 1964, gage height, 7.65 ft (2.332 m), from rating curve extended above 1,600 ft³/s (45.3 m³/s) on basis of slope-area measurement of peak flow; minimum, 33 ft³/s (0.93 m³/s) Oct. 2, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft³/s (12.7 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 26	0130	498	14.1	2.29	0.698	Dec. 15	0230	*843	23.9	*2.72	0.829

Minimum, 46 ft³/s (1.30 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	56	125	229	118	133	110	125	81	72	59	61
2	54	64	125	229	130	130	108	115	77	74	59	59
3	50	61	212	219	261	128	103	110	74	75	59	61
4	49	56	226	206	264	120	105	105	72	74	57	62
5	50	56	188	206	261	128	128	103	72	70	59	72
6	54	62	173	203	250	133	135	96	74	68	57	74
7	52	57	167	188	309	123	128	94	72	68	57	70
8	50	56	148	173	339	150	123	92	70	66	56	66
9	50	54	138	176	309	170	120	96	70	64	56	66
10	49	52	133	182	271	158	118	98	74	66	54	72
11	50	54	188	164	250	153	115	101	72	66	56	72
12	49	54	188	158	233	148	113	94	70	66	56	66
13	49	56	250	158	209	148	108	92	70	66	57	68
14	50	54	547	153	197	138	108	92	70	66	57	70
15	50	57	738	150	200	133	105	120	70	62	57	66
16	50	59	486	148	188	128	108	115	68	64	61	62
17	49	56	520	145	176	125	101	101	68	62	59	62
18	49	56	450	150	179	118	96	94	79	62	57	64
19	49	54	361	143	173	113	98	94	75	61	57	59
20	49	49	313	145	170	108	101	90	72	61	59	57
21	49	72	289	148	170	118	103	87	70	61	61	57
22	49	138	264	150	164	120	98	83	68	59	70	56
23	49	130	254	145	164	138	94	83	68	59	64	57
24	49	240	236	140	161	128	94	94	72	59	66	57
25	68	226	222	135	153	115	101	101	72	59	70	57
26	61	361	209	135	148	108	125	94	70	59	66	56
27	56	236	240	130	145	105	135	92	68	59	64	57
28	52	179	233	123	138	101	130	90	70	59	62	59
29	54	153	236	120	---	98	123	87	79	59	61	57
30	66	140	275	115	---	98	130	85	74	59	61	47
31	59	---	247	113	---	98	---	83	---	59	61	---
TOTAL	1621	2998	8381	4979	5730	3912	3364	3006	2161	1984	1855	1869
MEAN	52.3	99.9	270	161	205	126	112	97.0	72.0	64.0	59.8	62.3
MAX	68	361	738	229	339	170	135	125	81	75	70	74
MIN	49	49	125	113	118	98	94	83	68	59	54	47
AC-FT	3220	5950	16620	9880	11370	7760	6670	5960	4290	3940	3680	3710

CAL YR 1977 TOTAL 31883 MEAN 87.4 MAX 738 MIN 49 AC-FT 63240
WTR YR 1978 TOTAL 41860 MEAN 115 MAX 738 MIN 47 AC-FT 83030

14337500 BIG BUTTE CREEK NEAR MCLEOD, OR

LOCATION.--Lat 42°39'05", long 122°41'25", in NE¼NW¼ sec.3, T.34 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 225 ft (69 m) upstream from county road bridge, 0.9 mi (1.4 km) south of McLeod, and at mile 0.64 (1.03 km).

DRAINAGE AREA.--245 mi^2 (635 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to September 1957. October 1967 to current year.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,525.95 ft (465.110 m) National Geodetic Vertical Datum of 1929. Oct. 9, 1945, to Sept. 30, 1957, nonrecording gage at site 260 ft (79 m) downstream at datum 0.53 ft (0.162 m) higher.

REMARKS.--Water-discharge records good. Slight regulation by fish hatchery 600 ft (183 m) above station. Several diversions in the vicinity of Butte Falls, the two largest being the city of Medford diversion and Eagle Point Irrigation District Canal.

AVERAGE DISCHARGE.--23 years, 297 ft^3/s (8.411 m^3/s), 215,200 acre-ft/yr (265 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,950 ft^3/s (253 m^3/s) Dec. 22, 1955, gage height, 12.75 ft (3.886 m), site and datum then in use, from rating curve extended above 3,300 ft^3/s (93.5 m^3/s) on basis of slope-area measurement of peak flow; minimum, 6.4 ft^3/s (0.18 m^3/s) June 23, 24, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 18.6 ft (5.67 m), present site, from floodmark by local resident, discharge, 16,800 ft^3/s (476 m^3/s), from rating curve, at former site, extended above 9,000 ft^3/s (255 m^3/s) and field estimate of overflow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft^3/s (51.0 m^3/s) and maximum (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft^3/s)	(m^3/s)	(ft)	(m)			(ft^3/s)	(m^3/s)	(ft)	(m)
Nov. 26	0100	2,140	60.6	6.91	2.106	Feb. 3	0900	1,800	51.0	6.43	1.960
Dec. 15	0230	*3,910	111	*9.18							

Minimum, 40 ft^3/s (1.13 m^3/s) Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	120	212	454	239	227	172	203	95	84	50	47
2	43	150	245	466	374	224	186	192	92	104	50	43
3	46	150	533	442	1180	218	189	170	84	101	50	45
4	59	150	591	397	734	218	206	157	82	86	50	48
5	57	153	417	466	660	236	322	154	78	80	48	63
6	57	171	370	487	618	274	301	147	78	76	48	78
7	59	156	344	394	924	230	258	137	76	82	53	72
8	59	147	295	359	897	446	236	127	74	70	48	68
9	57	139	258	370	759	442	224	130	68	70	51	68
10	115	139	236	382	628	348	218	132	76	70	45	82
11	123	139	442	344	546	326	209	139	80	67	43	80
12	123	130	429	330	491	326	200	137	72	67	47	68
13	125	141	699	326	434	298	194	127	72	65	48	70
14	123	139	2620	312	397	274	189	125	72	63	45	80
15	120	144	2910	352	421	252	192	164	72	65	47	72
16	123	147	1480	359	378	233	197	170	70	61	53	65
17	120	139	1530	341	367	221	186	142	70	58	50	67
18	120	120	1040	344	370	212	167	130	92	56	48	80
19	120	130	764	322	341	203	178	120	97	58	47	67
20	120	130	614	301	326	215	192	120	88	53	51	63
21	120	261	555	308	315	252	189	115	84	54	53	61
22	120	790	495	319	301	281	172	110	78	54	68	61
23	120	595	478	291	295	301	167	104	78	53	63	60
24	120	1380	434	271	288	301	162	132	82	53	60	58
25	159	870	390	271	274	264	189	164	84	54	74	58
26	141	1330	359	288	264	248	239	137	80	56	65	56
27	94	785	483	252	252	239	224	127	78	51	54	54
28	69	551	454	239	236	233	209	125	78	51	53	58
29	123	450	483	227	---	230	194	118	92	53	50	56
30	162	352	675	227	---	233	203	106	84	51	50	53
31	141	---	520	212	---	192	---	101	---	51	51	---
TOTAL	3200	10198	21355	10453	13309	8197	6164	4262	2406	2017	1613	1901
MEAN	103	340	689	337	475	264	205	137	80.2	65.1	52.0	63.4
MAX	162	1380	2910	487	1180	446	322	203	97	104	74	82
MIN	43	120	212	212	236	192	162	101	68	51	43	43
AC-FT	6350	20230	42360	20730	26400	16260	12230	8450	4770	4000	3200	3770

CAL YR 1977 TOTAL 56373 MEAN 154 MAX 2910 MIN 15 AC-FT 111800
WTR YR 1978 TOTAL 85075 MEAN 233 MAX 2910 MIN 43 AC-FT 168700

14337500 BIG BUTTE CREEK NEAR MCLEOD, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1970 to current year.

REMARKS.--In addition to water temperature record, water-quality samples were collected approximately biweekly.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 24.0°C June 27, July 15-17, 1973, Aug. 2, 1977; minimum, 0.0°C Feb. 28 to Mar. 2, 1971, Feb. 2, 1972, Jan. 8, 9, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 23.5°C July 23, 26, Aug. 4, 6, 8; minimum, 1.5°C Nov. 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE (DEG C)	PH (UNITS)	OXYGEN, DISSOLVED (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)
OCT								
17...	1230	125	10.0	7.8	11.3	125	2	.67
27...	1200	139	8.5	7.8	11.3	110	3	1.1
NOV								
10...	1400	141	6.5	8.0	12.1	119	1	.38
23...	1240	434	4.0	--	--	--	17	20
28...	1200	551	6.5	7.7	12.0	81	--	--
DEC								
04...	1330	2560	--	--	--	--	99	684
06...	1330	370	7.0	7.8	--	88	10	10
JAN								
06...	1100	512	6.5	8.0	11.6	76	10	14
16...	1330	363	8.0	8.1	--	118	6	5.9
30...	1430	218	6.0	8.0	12.1	94	4	2.4
FEB								
03...	1320	1290	7.5	--	--	--	74	258
14...	1605	386	5.5	7.7	11.6	106	--	--
23...	1105	295	7.0	--	--	--	5	4.0
28...	1530	233	7.5	8.0	11.1	94	--	--
MAR								
15...	1230	245	7.0	7.8	11.2	85	1	.66
29...	1330	227	10.5	7.8	10.6	9	4	2.5
APR								
06...	1100	298	7.5	8.0	11.8	112	--	--
24...	1400	162	11.0	8.2	10.5	108	10	4.4
MAY								
01...	1000	206	9.0	--	--	--	6	3.3
08...	1200	132	12.0	7.6	10.9	110	7	2.5
22...	1400	113	13.0	8.6	9.1	107	2	.61
JUN								
06...	1005	82	15.5	7.8	9.0	127	5	1.1
20...	1320	86	18.5	8.5	9.2	132	--	--
JUL								
05...	1200	82	14.0	8.3	9.8	144	4	.89
18...	1100	58	15.5	8.2	9.7	135	3	.47
AUG								
02...	1325	58	19.0	8.5	9.6	121	1	.13
15...	1130	44	15.0	8.3	10.3	130	2	.24
25...	1045	78	15.0	--	--	--	2	.42
29...	1200	53	16.0	8.1	9.8	131	3	.43
SEP								
15...	1430	76	14.5	8.6	10.1	130	5	1.0
28...	1330	58	13.0	8.3	10.3	135	4	.63

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
DEC							
04...	1330	2560	99	684	28	35	40

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM
DEC						
04...	51	61	76	89	97	100

14337500 BIG BUTTE CREEK NEAR MCLEOD, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	8.0	10.0	8.5	8.0	6.5	5.0	3.5	6.0	5.0	7.0	4.0
2	13.0	8.5	10.0	7.5	8.5	7.5	5.5	5.0	6.0	5.0	7.0	5.5
3	13.0	9.0	7.5	6.0	9.0	8.5	7.0	5.5	8.0	6.0	9.5	6.5
4	12.5	8.5	6.5	5.5	9.0	8.0	7.0	5.5	7.0	6.0	9.5	7.5
5	13.0	9.5	8.0	6.5	8.0	6.0	6.5	5.5	8.0	7.0	8.5	8.0
6	10.5	9.0	9.0	7.5	7.5	6.0	7.0	6.0	7.5	6.0	9.5	7.0
7	12.0	9.0	9.0	6.5	8.0	7.0	7.0	5.0	7.5	6.5	9.5	8.0
8	11.5	7.5	7.0	5.0	7.0	5.0	8.0	6.0	6.5	5.5	[illegible]	8.5
9	11.0	7.0	6.5	4.0	6.0	4.5	8.0	8.0	6.5	6.0	10.0	8.0
10	10.5	7.0	7.0	4.5	6.0	5.0	8.0	7.0	6.0	4.5	8.5	7.5
11	11.0	7.5	8.0	6.5	7.5	6.0	7.0	5.5	5.5	4.0	8.5	7.0
12	11.5	8.0	7.5	6.0	7.0	6.5	7.0	6.0	5.5	4.5	8.0	6.0
13	11.5	8.5	9.0	7.0	8.5	7.0	8.0	7.0	6.5	4.5	8.5	6.5
14	11.5	8.0	8.5	7.5	9.0	8.5	8.0	7.5	6.0	5.0	8.0	5.0
15	11.5	8.0	10.0	8.5	9.0	6.5	7.5	6.5	6.0	5.0	9.0	5.0
16	11.5	8.5	9.0	6.5	6.0	6.0	8.0	6.5	5.5	4.5	10.0	5.5
17	11.5	8.0	7.0	5.0	6.0	5.5	8.0	7.0	6.0	5.0	11.0	7.0
18	11.5	8.0	5.5	4.0	6.0	5.5	7.0	6.5	8.5	6.0	11.5	7.5
19	11.0	8.5	5.5	3.0	5.5	4.0	7.5	6.0	8.0	6.0	12.0	8.0
20	9.5	8.0	3.0	1.5	4.5	3.5	8.5	7.0	8.0	6.0	12.5	8.0
21	10.0	7.5	3.0	2.0	6.5	4.5	7.5	6.5	9.0	6.5	13.0	9.5
22	9.5	6.5	3.5	2.5	6.5	6.0	6.5	5.5	8.5	6.5	12.0	10.5
23	9.5	8.0	4.5	3.5	7.5	6.5	5.0	4.0	8.5	7.0	10.0	9.0
24	10.0	9.0	6.0	4.5	7.0	6.5	4.5	3.0	9.5	7.5	9.5	7.5
25	10.5	9.5	8.0	6.0	6.5	4.5	6.0	4.0	8.5	6.5	11.5	7.5
26	10.0	8.5	8.0	7.0	5.5	4.5	7.5	6.0	8.5	7.0	12.5	9.0
27	9.5	8.0	8.0	7.0	7.0	5.5	6.0	4.5	8.0	5.5	13.0	9.0
28	9.0	7.5	7.5	6.5	7.0	6.0	6.5	5.0	7.5	4.5	13.0	9.0
29	9.0	8.0	8.5	7.5	7.5	6.5	7.0	6.0	---	---	10.5	9.5
30	9.5	8.0	9.0	8.0	7.0	5.5	6.0	4.5	---	---	12.0	9.5
31	9.0	7.5	---	---	6.0	4.5	7.0	5.5	---	---	11.5	9.5
MONTH	13.0	6.5	10.0	1.5	9.0	3.5	8.5	3.0	9.5	4.0	13.0	4.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.5	8.5	13.5	8.5	18.0	13.0	18.5	15.5	22.0	15.5	19.5	14.5
2	10.0	7.5	13.5	9.0	19.0	12.0	15.5	13.5	22.5	15.5	20.5	14.5
3	9.0	7.0	14.5	9.5	20.0	13.5	16.0	13.0	23.0	16.5	19.5	15.0
4	10.0	7.0	12.5	8.5	21.0	14.5	19.5	12.5	23.5	17.5	16.5	14.0
5	8.0	7.0	13.5	7.0	21.5	15.5	20.0	13.5	23.0	16.5	14.0	13.0
6	9.0	6.0	14.5	7.5	21.5	15.5	21.0	14.5	23.5	17.0	15.5	13.0
7	10.0	6.5	15.5	9.0	21.0	15.0	21.5	15.5	23.0	17.5	15.0	13.0
8	11.5	6.5	17.0	10.0	21.0	14.5	22.0	16.5	23.5	17.5	14.5	12.0
9	13.0	7.0	16.0	12.0	18.5	15.5	21.5	15.5	23.0	17.0	13.5	13.0
10	14.5	9.0	14.5	11.5	16.0	13.0	20.5	15.0	22.0	16.5	14.5	12.5
11	13.5	9.0	13.5	10.5	19.0	11.5	20.5	14.0	21.5	15.5	16.5	12.0
12	13.0	8.0	12.0	9.5	19.0	14.5	21.0	14.0	18.5	16.0	16.0	11.0
13	10.5	7.5	15.0	10.5	17.5	14.0	22.0	15.5	18.0	14.0	13.5	12.5
14	10.0	7.5	13.0	11.0	16.5	12.5	23.0	16.5	19.5	12.5	16.0	11.5
15	9.0	8.0	12.5	10.0	17.5	11.5	20.0	17.0	17.0	14.5	15.5	12.0
16	9.0	6.5	14.5	9.5	18.5	11.5	19.5	15.0	17.0	13.5	14.5	10.5
17	9.5	7.0	16.0	9.0	20.0	13.0	21.0	14.0	18.5	12.5	12.5	10.0
18	11.0	7.0	17.0	10.5	17.5	14.5	21.5	15.0	19.5	13.0	12.5	9.5
19	9.5	8.0	17.5	10.0	20.0	12.5	21.5	15.5	19.5	13.5	13.0	8.0
20	10.0	7.0	18.0	12.0	20.5	15.5	22.0	15.5	17.0	14.0	14.0	8.5
21	10.5	7.0	17.5	13.0	21.0	15.5	22.5	15.5	15.5	14.0	13.5	10.5
22	10.0	7.5	15.5	10.0	20.0	14.0	22.0	16.0	16.5	13.0	14.5	10.0
23	11.0	7.5	12.0	9.5	17.5	14.5	23.5	17.0	16.5	13.0	15.5	10.0
24	11.0	9.0	10.5	9.0	15.5	13.5	23.0	17.0	16.0	14.0	16.0	11.0
25	12.0	9.5	13.5	8.5	17.0	12.5	23.0	17.5	18.0	13.5	14.5	11.5
26	11.0	9.5	13.0	10.0	19.5	12.0	23.5	18.5	18.5	13.5	16.0	11.0
27	12.0	8.5	15.5	11.0	20.5	14.0	22.5	16.5	19.0	13.5	15.5	12.0
28	12.0	10.0	18.5	12.0	18.0	15.5	22.5	16.0	20.0	14.0	15.0	10.5
29	14.0	8.5	17.5	11.0	17.0	14.0	22.5	16.0	20.5	15.0	14.5	10.0
30	12.0	10.0	17.0	11.0	20.5	14.0	22.5	16.5	19.0	16.0	14.5	10.5
31	---	---	18.0	10.5	---	---	22.5	16.0	20.0	15.5	---	---
MONTH	14.5	6.0	18.5	7.0	21.5	11.5	23.5	12.5	23.5	12.5	20.5	8.0

14337600 ROGUE RIVER NEAR MCLEOD, OR

LOCATION.--Lat 42°39'20", long 122°42'50", in SW¼ sec.33, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on left bank at Obstinate J Ranch, 1.3 mi (2.1 km) downstream from Big Butte Creek, 1.6 mi (2.6 km) southwest of McLeod, and at mile 154.0 (247.8 km).

DRAINAGE AREA.--938 mi^2 (2,429 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,489.08 ft (453.872 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Flow regulated since February 1977 by Lost Creek Lake (see station 14335040). Diversions for irrigation above station; most of low flow of Big Butte Creek is diverted near Butte Falls.

AVERAGE DISCHARGE.--13 years, 2,153 ft^3/s (60.97 m^3/s), 1,560,000 acre-ft/yr (1.92 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft^3/s (850 m^3/s) Mar. 3, 1972, gage height, 12.24 ft (3.731 m); minimum, 468 ft^3/s (13.3 m^3/s) Feb. 18, 1977, result of closure of Lost Creek dam, minimum prior to that time, 604 ft^3/s (17.1 m^3/s) Sept. 5, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1928, 20.35 ft (6.203 m) Dec. 22, 1964, from floodmarks, discharge, 74,300 ft^3/s (2,100 m^3/s), from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,200 ft^3/s (430 m^3/s) Dec. 15, gage height, 8.38 ft (2.554 m); minimum, 957 ft^3/s (27.1 m^3/s) May 7, result of regulation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1180	1190	1350	2930	1150	1130	2000	2180	1750	2050	2110	1670
2	1160	1150	1320	2920	1200	1120	2040	2130	1780	2090	1950	1670
3	1150	1160	2030	2470	3140	1120	2040	1950	1820	2100	1950	1660
4	1150	1140	4010	2290	3510	1120	2060	1760	1800	2090	1950	1680
5	1160	1150	1880	2380	3410	1140	2200	1410	1810	2170	1990	1690
6	1160	1180	1440	2500	2680	1200	1830	1740	1850	2270	1980	1610
7	1160	1170	2590	2290	2620	1250	1400	1710	1880	2270	1960	1450
8	1160	1160	1330	2160	3120	1780	1370	1400	1950	2250	1960	1300
9	1150	1150	1280	2370	2650	1850	1350	1520	2060	2260	2000	1190
10	1220	1140	1260	2620	1980	1750	1340	1390	2180	2270	1990	1210
11	1230	1130	1450	2340	1420	1720	1330	1580	2290	2350	1980	1210
12	1230	1140	1480	2180	1350	1720	1320	1850	2310	2500	1990	1210
13	1230	1140	2930	2350	1320	1690	1310	2120	2330	2580	2000	1280
14	1240	1140	10900	2310	1260	1660	1360	2130	2260	2590	1990	1430
15	1240	1140	13000	2570	1300	1570	1720	2380	2180	2610	1980	1420
16	1240	1150	5450	2780	1260	1500	1720	2490	2110	2610	1980	1410
17	1220	1150	3910	2870	1250	1430	1700	2460	2120	2590	1850	1410
18	1230	1130	2180	2750	1240	1290	1690	2370	2150	2570	1880	1430
19	1230	1140	1810	2650	1190	1280	1690	2040	2150	2540	1820	1420
20	1220	1140	1670	2580	1170	1290	1600	1830	2130	2550	1940	1400
21	1220	1200	1670	2540	1210	1350	1510	1810	2130	2590	1860	1410
22	1220	1610	1560	2500	1230	1430	1670	1810	2130	2620	1670	1400
23	1230	1810	1540	2200	1220	1520	1630	1850	2130	2610	1690	1400
24	1230	2100	1500	2090	1200	1870	1530	2020	2130	2590	1650	1400
25	1270	2100	1450	1990	1190	2110	1690	2090	2130	2590	1690	1400
26	1270	2330	1420	1650	1190	2090	1770	1920	2170	2590	1680	1410
27	1220	3300	2310	1300	1170	2090	2040	1880	2170	2590	1670	1400
28	1190	2970	3040	1290	1150	2060	2210	1880	2120	2590	1680	1360
29	1230	1740	3050	1270	---	2060	2170	1890	2100	2590	1680	1390
30	1300	1510	3280	1260	---	2060	2180	1830	2020	2590	1670	1380
31	1270	---	3120	1250	---	2020	---	1820	---	2420	1670	---
TOTAL	37610	43660	87210	69650	47780	49270	51470	59240	62140	75680	57860	42700
MEAN	1213	1455	2813	2247	1706	1589	1716	1911	2071	2441	1866	1423
MAX	1300	3300	13000	2930	3510	2110	2210	2490	2330	2620	2110	1690
MIN	1150	1130	1260	1250	1150	1120	1310	1390	1750	2050	1650	1190
AC-FT	74600	86600	173000	138200	94770	97730	102100	117500	123300	150100	114800	84700

CAL YR 1977 TOTAL 434301 MEAN 1190 MAX 13000 MIN 609 AC-FT 861400
WTR YR 1978 TOTAL 684270 MEAN 1875 MAX 13000 MIN 1120 AC-FT 1357000

14337600 ROGUE RIVER NEAR MCLEOD, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1970 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 18.0°C July 17, 18, Aug. 7, 1973; minimum, 0.5°C Jan. 3-5, 14, 15, 1971.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 14.5°C Aug. 19, Aug. 27 to Sept. 3; minimum, 4.0°C Feb. 11, Mar. 1.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.0	10.5	10.5	10.0	6.5	6.0	5.5	4.5	5.5	5.0	6.0	4.0
2	12.0	10.5	10.5	9.0	7.5	6.5	5.5	5.0	5.5	5.0	5.5	5.0
3	12.0	10.5	10.0	9.0	7.5	7.0	6.0	5.5	6.0	5.5	7.0	5.5
4	12.0	10.5	9.5	9.0	7.0	6.5	5.5	5.0	5.5	5.0	7.0	5.5
5	12.0	10.5	9.5	9.0	6.5	6.0	5.5	5.0	6.0	5.0	6.0	5.5
6	11.5	10.5	10.0	9.0	7.0	6.0	6.0	5.0	6.0	5.0	7.0	5.5
7	12.5	11.0	9.5	8.5	6.5	6.0	5.5	5.0	6.5	5.5	6.5	5.5
8	12.5	11.0	9.0	8.5	6.0	5.5	6.0	5.5	5.5	5.0	6.5	6.0
9	12.5	11.0	9.0	8.0	6.0	5.5	6.0	5.5	5.5	5.0	7.0	6.0
10	12.5	11.0	9.0	8.0	6.5	5.5	6.0	5.5	5.0	4.5	6.5	5.5
11	12.5	11.0	9.0	8.5	6.5	6.0	5.5	5.0	5.5	4.0	6.5	5.5
12	12.5	11.0	9.0	8.5	6.5	6.0	6.0	5.0	5.5	4.5	6.5	5.0
13	12.5	11.0	9.0	8.5	7.0	6.5	6.0	5.0	6.0	4.5	6.5	5.5
14	12.0	11.0	9.0	8.5	7.0	6.5	6.0	5.5	5.5	5.0	6.5	5.0
15	12.5	11.0	9.0	8.5	6.5	5.5	6.0	5.5	5.5	4.5	6.5	5.0
16	12.0	11.0	9.0	8.0	6.0	5.5	6.0	5.5	5.0	4.5	7.0	5.0
17	12.0	10.5	8.5	7.5	6.0	5.5	6.0	5.5	5.5	5.0	7.0	5.5
18	12.0	10.5	8.0	7.5	6.0	5.5	5.5	5.5	7.0	5.5	7.5	5.5
19	11.5	.0.5	7.5	6.5	5.5	4.5	6.0	5.5	7.0	5.0	7.5	5.5
20	11.5	10.5	7.5	6.5	5.5	4.5	6.0	5.5	7.0	5.0	8.0	5.5
21	11.5	10.0	7.5	5.5	6.0	5.5	6.0	5.5	7.0	5.5	8.0	6.0
22	11.0	10.0	6.0	5.0	6.0	5.5	5.5	5.0	7.0	5.0	7.5	6.5
23	11.0	10.5	6.5	5.5	6.5	5.5	5.5	5.0	6.5	5.5	7.0	6.0
24	11.5	10.5	6.5	5.5	6.0	5.0	5.5	4.5	6.5	5.5	6.5	5.5
25	11.0	10.5	7.5	6.5	5.5	4.5	6.0	5.0	6.5	5.5	7.0	5.5
26	11.0	10.5	7.5	6.5	5.5	4.5	6.0	5.5	6.0	5.5	7.0	6.0
27	11.0	10.0	6.5	6.5	6.0	5.0	6.0	5.0	6.5	5.0	7.5	5.5
28	10.5	10.0	6.5	6.0	5.5	5.0	6.0	5.0	6.5	4.5	7.0	6.0
29	10.5	10.0	7.0	6.0	6.0	5.0	6.0	5.0	---	---	6.5	6.0
30	10.5	10.0	7.0	6.0	5.5	5.0	6.0	---	---	---	7.5	6.0
31	10.5	10.0	---	---	5.5	5.0	6.0	5.0	---	---	6.5	6.0
MONTH	12.5	10.0	10.5	5.0	7.5	4.5	6.0	4.5	7.0	4.0	8.0	4.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	6.0	9.5	7.5	---	---	---	---	11.5	10.0	14.5	13.5
2	7.0	6.0	9.5	8.0	---	---	---	---	12.0	10.0	14.5	13.5
3	6.5	6.0	10.0	7.5	---	---	---	---	12.0	10.5	14.5	13.5
4	6.5	6.0	9.5	7.5	---	---	---	---	12.5	10.5	13.5	13.0
5	6.5	6.0	10.0	7.5	---	---	---	---	12.5	10.5	13.5	13.0
6	7.0	6.0	10.0	7.5	---	---	---	---	12.5	11.0	14.0	13.0
7	7.5	6.0	10.0	8.0	---	---	---	---	13.0	11.0	14.0	13.0
8	8.0	5.5	11.0	8.0	---	---	---	---	12.5	11.0	13.5	11.0
9	8.5	6.0	10.0	8.5	13.5	10.0	---	---	12.5	10.5	11.5	10.5
10	10.0	6.5	---	---	11.0	9.5	---	---	12.0	10.5	11.5	10.5
11	9.5	7.5	---	---	11.0	10.0	---	---	13.0	11.0	12.0	10.5
12	9.5	7.0	---	---	11.5	9.5	---	---	13.0	12.5	12.0	10.5
13	9.0	7.0	---	---	11.5	10.0	13.5	---	13.5	12.5	11.5	11.0
14	8.5	7.5	---	---	11.5	10.5	14.0	12.0	14.0	12.5	12.5	11.0
15	8.0	7.5	---	---	11.5	10.0	13.5	12.0	13.5	12.5	12.0	10.5
16	8.0	7.0	---	---	11.5	10.0	13.0	12.0	13.5	12.5	12.0	10.5
17	8.5	7.5	---	---	12.0	10.0	13.0	12.0	14.0	12.5	11.5	10.5
18	9.0	7.5	---	---	12.0	10.5	13.5	12.0	14.0	12.5	12.0	10.5
19	8.5	7.5	---	---	12.5	10.5	13.5	12.0	14.5	12.5	13.0	11.0
20	8.5	7.5	---	---	12.5	11.0	13.0	11.5	13.5	13.0	13.0	11.5
21	9.0	7.5	---	---	12.5	11.0	12.0	9.5	13.5	13.0	12.0	10.0
22	8.5	7.5	---	---	12.5	11.0	11.0	9.5	14.0	13.0	11.0	9.5
23	8.5	7.5	---	---	12.0	11.0	11.0	9.5	14.0	13.0	11.0	9.5
24	9.0	8.0	---	---	12.0	11.0	11.5	9.0	13.5	12.5	11.0	9.5
25	9.0	8.0	---	---	12.0	11.0	11.5	10.0	14.0	13.0	11.0	10.0
26	8.5	8.0	---	---	12.0	11.0	11.5	10.0	14.0	13.0	11.5	9.5
27	9.0	8.0	---	---	12.5	11.5	11.5	9.5	14.5	13.0	11.0	9.5
28	9.0	8.0	---	---	13.0	12.0	12.0	10.0	14.5	13.0	11.0	9.5
29	9.5	7.5	---	---	---	---	12.0	10.0	14.5	13.0	11.0	9.5
30	9.0	7.5	---	---	---	---	12.0	10.5	14.5	13.0	11.0	9.5
31	---	---	---	---	---	---	11.5	10.0	14.5	13.0	---	---
MONTH	10.0	5.5	11.0	7.5	13.5	9.5	14.0	9.0	14.5	10.0	14.5	9.5

14337800 ELK CREEK NEAR CASCADE GORGE, OR

LOCATION.--Lat 42°46'25", long 122°40'15", in NW¼ sec.23, T.32 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 0.1 mi (0.2 km) downstream from Sugarpine Creek, 6.5 mi (10.5 km) northwest of town of Cascade Gorge, and at mile 10.7 (17.2 km).

DRAINAGE AREA.--78.8 mi² (204.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1973 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,813.83 ft (552.855 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Water-discharge records good. No regulation. Many diversions above station for irrigation.

AVERAGE DISCHARGE.--5 years, 158 ft³/s (4.475 m³/s), 27.23 in/yr (692 mm/yr), 114,500 acre-ft/yr (141 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,780 ft³/s (192 m³/s) Jan. 15, 1974, gage height, 8.9 ft (2.71 m), from floodmark; minimum daily, 0.72 ft³/s (0.020 m³/s) Aug. 24, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 24	1030	2,880	81.6	6.84	2.085
Dec. 3	0300	1,660	47.0	5.81	1.771
Dec. 14	1700	*3,530	100	*7.28	2.219

Minimum, 3.2 ft³/s (0.091 m³/s) Aug. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	26	288	285	132	101	85	95	33	30	5.5	6.9
2	10	25	325	257	289	95	85	89	33	30	5.5	6.9
3	8.3	22	1250	250	1120	91	83	81	31	30	5.1	6.1
4	7.6	19	700	231	653	95	97	76	29	27	4.8	6.1
5	6.6	26	442	281	459	101	155	72	28	24	4.8	9.9
6	8.0	57	325	318	372	105	177	67	26	21	4.3	14
7	9.9	43	254	307	634	97	150	62	25	20	4.6	14
8	8.0	32	194	267	732	169	130	59	24	19	4.6	12
9	7.3	25	159	254	528	215	118	57	23	16	4.0	16
10	6.6	22	135	260	395	186	114	54	29	16	3.7	51
11	6.0	18	227	237	311	160	103	55	28	15	4.0	59
12	5.7	17	316	224	264	140	95	52	23	14	4.0	34
13	5.4	17	652	224	221	135	89	51	21	13	5.1	25
14	5.4	20	2500	218	191	123	83	50	21	12	5.5	24
15	5.4	69	2000	234	186	111	79	52	20	12	5.1	20
16	5.2	100	982	459	163	103	77	54	20	12	7.4	16
17	5.4	55	867	534	163	95	70	48	20	12	6.5	16
18	5.2	41	562	449	200	89	67	45	26	12	5.8	19
19	4.9	33	391	372	215	85	65	43	26	10	5.5	20
20	4.9	28	303	326	218	81	65	42	22	9.9	5.5	18
21	5.2	84	264	300	206	81	70	40	20	9.3	7.9	16
22	5.2	447	250	289	188	87	74	38	17	8.3	11	14
23	5.4	382	307	260	171	99	79	38	16	7.9	10	13
24	7.0	2080	386	228	155	120	83	43	17	7.9	8.8	12
25	43	1590	338	203	140	109	93	55	20	7.4	34	11
26	37	1590	281	191	127	101	111	48	18	7.4	17	10
27	20	821	307	171	118	93	125	47	16	6.9	12	10
28	15	529	338	152	107	89	116	43	21	6.5	9.9	9.3
29	14	421	330	137	---	85	103	39	70	6.1	9.3	8.8
30	34	368	386	125	---	89	101	37	39	5.8	7.4	9.3
31	30	---	346	118	---	81	---	36	---	5.8	7.4	---
TOTAL	354.6	9007	16405	8161	8658	3411	2942	1660	762	434.2	236.0	507.3
MEAN	11.4	300	529	263	309	110	98.1	53.8	25.4	14.0	7.61	16.9
MAX	43	2080	2500	534	1120	215	177	95	70	30	34	59
MIN	4.9	17	135	118	107	81	65	36	16	5.8	3.7	6.1
CFSM	.15	3.81	6.71	3.34	3.92	1.40	1.25	.68	.32	.18	.10	.21
IN.	.17	4.25	7.74	3.85	4.09	1.61	1.39	.79	.36	.20	.11	.24
AC-FT	703	17870	32540	16190	17170	6770	5840	3310	1510	861	468	1010

CAL YR 1977 TOTAL 35030.3 MEAN 96.0 MAX 2500 MIN 1.3 CFSM 1.22 IN 16.54 AC-FT 69480
WTR YR 1978 TOTAL 52546.1 MEAN 144 MAX 2500 MIN 3.7 CFSM 1.83 IN 24.81 AC-FT 104200

NOTE.--No gage-height record Dec. 13-15.

14337800 ELK CREEK NEAR CASCADE GORGE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1973 to October 1976, August 1977 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum recorded, 28.5°C July 29, 30, 1973; minimum, 0.0°C Nov. 20-22, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 28.0°C Aug. 7, 8; minimum, 0.0°C Nov. 20-22.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.5	7.5	11.0	8.0	7.0	6.0	5.0	4.0	5.0	4.5	7.5	2.5
2	14.0	7.5	10.0	6.5	7.5	6.5	5.5	4.5	5.5	4.0	7.0	4.0
3	14.0	8.0	8.0	5.0	8.0	7.5	6.5	5.5	7.0	5.5	9.0	6.0
4	14.0	8.0	6.5	5.0	8.0	6.5	6.0	5.0	7.5	6.5	9.5	6.0
5	14.5	9.5	8.0	6.5	6.5	5.5	6.0	5.5	7.5	6.5	8.5	6.5
6	11.0	9.5	9.0	7.0	7.5	6.0	6.5	5.0	7.5	6.0	9.5	6.0
7	14.5	9.5	9.0	5.5	7.0	4.5	6.5	4.5	6.5	6.0	8.5	6.5
8	13.0	7.5	6.5	3.5	4.5	3.5	7.5	6.0	6.5	6.0	8.0	7.0
9	12.5	6.5	6.0	2.5	5.0	3.5	7.5	7.0	6.5	5.0	8.5	6.5
10	12.5	6.5	6.5	3.5	5.5	4.0	7.5	6.0	5.5	4.5	8.5	5.0
11	13.5	7.5	7.0	5.5	6.5	5.5	6.5	5.5	5.0	3.5	7.5	5.5
12	13.5	8.0	7.5	4.5	7.0	6.0	7.0	5.5	5.5	3.5	8.0	4.5
13	14.5	9.0	8.0	6.5	8.0	6.5	7.5	6.5	6.5	4.0	8.0	4.0
14	13.5	8.5	8.0	6.5	8.0	8.0	7.5	7.0	6.0	4.5	8.5	3.5
15	14.0	8.5	9.0	7.5	8.0	6.0	7.0	6.0	6.5	4.0	9.0	3.0
16	14.0	9.5	8.0	5.5	6.0	5.5	7.0	6.0	5.0	3.5	11.0	4.0
17	14.0	8.5	7.5	4.0	6.0	5.0	7.0	6.5	5.5	4.0	11.5	5.0
18	14.0	8.0	4.5	2.5	6.0	5.0	7.0	6.0	8.0	5.5	12.5	6.0
19	14.0	9.0	3.0	.5	5.0	4.0	7.0	6.0	8.0	5.0	13.0	6.5
20	11.5	8.5	1.0	.0	5.0	3.5	8.0	6.5	8.5	5.0	13.5	6.5
21	12.5	7.5	.0	.0	6.0	4.5	7.0	6.0	9.0	5.5	13.5	8.0
22	11.0	7.0	4.5	.0	6.5	5.0	6.0	4.5	9.0	5.5	12.0	9.0
23	11.5	9.0	5.0	4.0	6.5	5.5	5.0	3.5	9.0	6.0	9.5	7.5
24	12.0	9.5	6.0	4.0	7.0	5.0	5.0	3.0	8.5	6.5	9.0	7.0
25	11.5	10.0	7.0	6.0	5.5	4.5	6.0	4.0	8.0	5.5	12.5	6.0
26	12.0	8.5	7.5	6.5	6.0	4.5	7.0	5.0	8.0	5.5	---	7.0
27	10.5	8.0	7.0	6.5	6.5	5.5	6.0	3.5	8.0	4.5	---	---
28	10.0	7.5	7.0	6.0	7.0	6.0	7.0	4.5	7.5	3.0	---	---
29	9.5	8.5	8.0	6.5	7.0	6.0	7.0	5.0	---	---	---	---
30	9.5	8.0	7.5	6.5	6.0	5.0	6.5	4.0	---	---	---	---
31	10.0	8.0	---	---	5.0	4.0	6.5	5.0	---	---	---	---
MONTH	14.5	6.5	11.0	.0	8.0	3.5	8.0	3.0	9.0	3.0	13.5	2.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	13.5	7.0	19.5	11.0	21.0	14.5	25.5	15.5	22.0	14.0
2	---	---	13.5	6.5	19.5	11.0	17.5	14.0	26.0	15.5	22.0	14.5
3	---	---	14.5	7.5	21.0	12.0	16.0	13.0	26.5	16.5	21.0	15.5
4	---	---	11.5	6.0	22.0	13.0	20.5	12.0	27.0	18.0	19.0	15.0
5	---	---	13.0	5.0	23.0	14.0	21.5	13.0	26.5	17.0	15.0	13.0
6	---	---	14.5	5.0	23.0	14.5	23.0	13.5	27.0	17.5	16.5	13.0
7	---	---	16.0	6.5	22.5	14.0	23.5	15.0	28.0	18.5	---	---
8	---	---	17.5	8.0	23.0	14.0	24.0	15.5	28.0	19.0	---	---
9	---	---	15.0	10.5	17.5	14.0	23.0	15.0	27.5	18.0	---	---
10	---	---	14.0	9.5	15.0	12.0	22.0	14.5	25.0	17.0	---	---
11	---	---	12.0	9.0	20.0	10.5	22.0	13.0	24.5	16.0	---	---
12	---	---	10.5	7.5	19.5	13.5	23.5	13.5	21.0	17.0	---	---
13	---	5.5	13.5	9.0	18.5	13.5	24.5	15.0	20.0	15.0	---	---
14	9.5	6.0	11.5	9.5	17.5	11.5	26.0	16.5	22.0	12.5	---	---
15	8.5	6.5	12.0	8.5	18.0	10.0	23.0	17.5	18.5	14.5	---	---
16	8.5	5.5	14.5	8.0	19.5	10.0	21.0	15.0	19.5	14.0	---	---
17	10.0	5.5	16.5	7.0	21.5	11.5	23.0	13.5	21.0	12.5	---	---
18	11.5	5.5	17.5	8.5	16.5	13.5	23.5	14.0	21.5	12.0	---	---
19	8.5	7.0	18.5	10.5	21.0	11.5	24.5	15.0	22.0	13.0	---	---
20	9.0	5.5	18.5	10.5	22.5	15.0	25.0	15.0	19.0	14.5	---	---
21	9.5	5.0	17.5	11.5	23.0	15.0	25.5	15.5	16.0	14.0	---	---
22	9.0	5.5	15.5	8.5	21.5	13.0	24.5	15.5	16.5	13.5	---	---
23	10.0	5.5	10.5	7.5	18.5	14.0	27.0	17.5	17.0	12.5	---	---
24	10.5	6.5	10.0	8.0	17.0	13.0	27.0	17.5	16.5	14.0	---	---
25	11.0	8.0	13.0	7.0	16.0	11.0	27.0	18.0	18.5	13.0	---	---
26	9.0	7.5	12.0	8.0	20.5	11.0	27.5	20.0	20.0	12.0	---	---
27	11.5	7.0	14.0	9.0	22.5	13.0	26.0	16.5	20.5	12.5	---	---
28	12.0	7.5	18.5	9.5	19.0	15.0	26.0	16.0	21.5	13.5	---	---
29	13.5	6.0	18.0	9.0	17.5	13.5	26.0	16.0	22.0	14.5	---	---
30	11.0	7.5	17.5	8.5	21.5	13.0	26.0	16.5	23.0	16.5	---	---
31	---	---	18.5	8.5	---	---	26.0	20.5	21.5	15.5	---	---
MONTH	13.5	5.0	18.5	5.0	23.0	10.0	27.5	12.0	28.0	12.0	22.0	13.0

14337870 WEST BRANCH ELK CREEK NEAR TRAIL, OR

LOCATION.--Lat 42°42'40", long 122°44'55", in SW¼ sec.7, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on Bureau of Land Management land, on left bank 300 ft (91 m) upstream from Spot Creek and 5.3 mi (8.5 km) northeast of Trail.

DRAINAGE AREA.--14.2 mi² (36.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to September 1976, October 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,773.24 ft (540.484 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records fair. No regulation or diversions above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 1,410 ft³/s (39.9 m³/s) Jan. 15, 1974, gage height, 5.30 ft (1.615 m), from rating curve extended above 600 ft³/s (17.0 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.80 ft³/s (0.023 m³/s) Oct. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.50 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	2200	359	10.2	3.12	0.951
Dec. 14	1900	*581	16.5	*3.76	1.146
Feb. 3	0800	359	10.2	2.97	0.905

Minimum, 0.80 ft³/s (0.023 m³/s) Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	3.9	20	35	15	11	9.6	7.1	4.9	4.1	1.5	1.9
2	1.1	4.1	19	28	39	10	9.9	6.9	4.5	5.6	1.4	1.8
3	.92	3.3	59	26	244	9.0	9.6	6.6	4.3	4.9	1.4	1.8
4	.88	3.6	47	24	99	9.5	12	6.3	4.1	4.9	1.4	2.0
5	.84	4.7	32	32	73	10	20	6.1	4.1	4.1	1.4	3.0
6	1.3	8.0	24	41	48	11	26	5.9	3.9	3.6	1.4	3.3
7	1.2	7.4	20	48	111	10	23	5.4	3.9	3.3	1.4	3.3
8	1.0	6.1	17	38	134	16	19	5.2	3.8	3.0	1.3	2.8
9	.96	4.9	15	32	102	25	16	4.9	3.9	2.8	1.3	4.9
10	.92	3.9	12	31	63	22	14	5.2	5.4	2.6	1.3	14
11	.88	3.4	28	30	45	19	12	5.6	5.2	2.6	1.4	12
12	.88	3.1	49	26	35	17	11	5.2	4.3	2.4	1.5	6.3
13	.92	3.1	99	24	28	15	9.6	4.9	4.1	2.3	1.7	4.5
14	.92	2.8	337	23	23	14	8.9	5.2	4.1	2.3	1.6	4.7
15	.92	3.6	264	26	22	13	8.9	5.9	3.8	2.1	1.7	4.7
16	.92	4.3	117	79	19	12	8.0	6.3	3.6	2.2	2.0	3.9
17	.96	4.3	137	96	19	11	7.1	5.6	3.4	2.2	1.8	4.3
18	.96	3.9	65	70	24	10	6.6	4.9	4.9	2.1	1.7	11
19	.96	3.6	42	55	33	9.6	6.3	4.9	4.5	2.0	1.7	8.3
20	1.0	3.3	31	41	31	9.3	6.6	4.7	4.1	1.8	1.7	5.6
21	1.1	9.2	27	35	26	9.0	6.1	4.5	3.8	1.7	2.8	4.3
22	1.1	68	31	32	22	9.5	6.1	4.5	3.4	1.7	2.7	3.8
23	1.2	49	52	28	19	10	5.6	5.2	3.3	1.7	2.3	3.3
24	1.5	229	65	24	17	14	5.4	7.4	3.8	1.6	2.7	3.1
25	11	260	50	22	16	13	6.1	8.6	3.9	1.5	7.1	2.7
26	7.4	165	36	19	14	12	6.3	7.1	3.3	1.5	3.1	2.6
27	3.6	102	37	17	13	11	7.7	6.6	3.1	1.5	2.4	2.4
28	2.6	52	41	15	12	10	8.0	5.9	3.4	1.5	2.1	2.4
29	3.3	35	40	14	---	8.9	7.1	5.4	6.3	1.5	2.0	2.3
30	9.6	25	47	13	---	9.9	7.4	4.9	4.7	1.4	1.9	2.3
31	6.3	---	44	12	---	9.6	---	4.7	---	1.4	1.9	---
TOTAL	68.44	1079.5	1904	1036	1346	380.3	309.9	177.6	123.8	77.9	61.6	133.3
MEAN	2.21	36.0	61.4	33.4	48.1	12.3	10.3	5.73	4.13	2.51	1.99	4.44
MAX	11	260	337	96	244	25	26	8.6	6.3	5.6	7.1	14
MIN	.84	2.8	12	12	12	8.9	5.4	4.5	3.1	1.4	1.3	1.8
CFSM	.16	2.54	4.32	2.35	3.39	.87	.73	.40	.29	.18	.14	.31
IN.	.18	2.83	4.99	2.71	3.53	1.00	.81	.47	.32	.20	.16	.35
AC-FT	136	2140	3780	2050	2670	754	615	352	246	155	122	264

WTR YR 1978 TOTAL 6698.34 MEAN 18.4 MAX 337 MIN .84 CFSM 1.30 IN 17.55 AC-FT 13290

NOTE.--No gage-height record Feb. 25 to Mar. 28.

14337870 WEST BRANCH ELK CREEK NEAR TRAIL, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August to September 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 24.5°C Aug. 21; minimum, 9.0°C Sept. 22, 30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1									---	---	20.0	12.0
2									---	---	21.0	13.5
3									---	---	21.5	14.5
4									---	---	22.0	15.5
5									---	---	23.0	16.0
6									---	---	21.0	13.5
7									---	---	21.0	14.0
8									---	---	20.0	12.5
9									---	---	19.5	12.0
10									---	---	20.0	12.5
11									---	---	20.5	13.0
12									---	---	20.0	12.5
13									---	---	20.0	13.5
14									---	---	20.0	14.5
15									---	---	14.5	13.0
16									---	---	15.0	11.5
17									---	---	14.5	12.5
18									---	---	15.5	12.5
19									---	---	15.5	13.0
20									21.5	17.0	14.5	12.0
21									24.5	17.0	15.5	11.0
22									23.0	15.0	14.5	9.0
23									23.0	15.5	12.0	10.5
24									21.0	17.0	14.5	10.0
25									17.0	15.0	15.0	11.5
26									17.5	14.0	16.5	11.5
27									17.5	13.5	13.5	12.5
28									18.0	15.0	13.0	12.0
29									20.5	14.0	12.5	10.0
30									21.0	15.0	12.0	9.0
31									20.0	13.0	---	---
MONTH									24.5	13.0	23.0	9.0

14337870 WEST BRANCH ELK CREEK NEAR TRAIL, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1977 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 25.5°C Aug. 8, 1978; minimum, 0.0°C Nov. 20-22, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 25.5°C Aug. 8; minimum, 0.0°C Nov. 20-22.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	8.0	10.5	8.5	7.0	6.5	5.0	4.0	5.0	4.0	7.5	3.0
2	12.5	8.0	10.0	7.0	8.5	7.0	6.0	4.5	6.0	4.0	7.0	4.5
3	12.5	8.0	8.5	5.5	8.5	8.0	7.0	5.5	7.5	6.0	9.5	6.0
4	13.0	8.0	7.0	5.0	9.0	7.0	6.0	5.0	7.5	6.5	9.5	6.5
5	13.5	9.5	8.0	6.5	6.5	5.5	6.5	5.5	8.0	6.5	8.5	7.0
6	11.0	9.5	8.5	7.0	7.5	6.0	6.5	5.0	7.5	6.0	10.0	6.5
7	12.5	9.0	8.5	6.0	7.0	4.5	6.5	5.0	7.0	6.0	8.5	7.0
8	12.0	8.0	6.5	4.5	4.5	3.5	7.5	6.5	7.0	6.0	8.0	7.5
9	11.0	6.5	6.5	3.5	5.0	3.0	8.0	7.0	6.5	6.0	8.5	6.5
10	11.5	7.0	7.0	4.5	5.5	3.5	7.5	6.0	5.5	4.0	8.0	6.0
11	12.5	7.5	8.0	6.0	7.0	5.5	6.5	5.0	5.0	3.0	8.0	5.5
12	12.5	8.5	7.0	5.0	7.0	6.5	7.0	5.5	5.5	3.5	8.0	5.0
13	13.5	9.0	8.0	6.5	8.0	7.0	7.5	7.0	6.0	4.0	8.0	5.0
14	13.0	9.0	8.0	6.5	8.5	8.5	7.5	7.0	6.0	4.5	8.0	4.0
15	13.5	9.0	9.5	7.0	8.5	6.5	7.0	6.0	5.5	4.0	9.0	4.0
16	13.5	9.5	7.0	5.0	6.5	5.5	7.5	6.0	5.0	3.5	10.5	4.5
17	13.0	9.0	6.0	3.5	6.5	5.5	7.5	6.5	5.5	4.5	11.5	5.5
18	13.0	9.0	4.5	2.5	6.5	5.5	7.5	6.5	7.5	5.5	12.5	6.5
19	13.0	9.5	3.5	1.0	5.0	4.0	7.5	6.5	8.0	5.0	13.0	7.0
20	11.0	8.5	1.5	.0	4.5	3.5	8.0	7.0	8.5	5.5	13.5	7.0
21	11.0	7.5	.5	.0	5.5	4.5	7.5	6.0	9.0	6.5	14.0	8.5
22	10.5	7.0	4.5	.0	6.0	5.0	6.0	4.5	9.0	6.0	11.5	9.0
23	11.0	9.5	5.0	4.5	7.0	5.5	4.5	3.5	9.0	6.5	9.5	7.5
24	12.0	9.0	7.0	5.0	7.0	5.5	4.5	3.0	9.0	7.0	9.0	7.0
25	11.5	9.5	7.5	7.0	5.5	4.5	6.0	4.0	8.5	6.0	12.5	6.5
26	10.5	8.5	8.0	7.0	6.0	4.5	6.5	5.0	8.0	5.5	14.0	8.0
27	10.0	7.5	7.5	7.0	7.0	5.5	5.5	4.0	8.0	4.5	14.5	8.0
28	9.5	8.0	7.5	6.5	7.0	6.0	6.5	4.5	7.5	3.5	14.0	8.0
29	9.5	8.5	9.0	7.5	7.0	6.0	6.5	5.0	---	---	---	8.5
30	9.5	8.5	8.5	7.0	6.0	5.0	6.0	4.0	---	---	---	---
31	10.0	8.0	---	---	5.0	4.0	6.5	5.0	---	---	---	---
MONTH	13.5	6.5	10.5	.0	9.0	3.0	8.0	3.0	9.0	3.0	14.5	3.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	12.5	6.5	18.5	11.0	17.5	14.0	22.5	15.0	19.5	13.5
2	---	---	12.5	7.0	19.5	10.5	16.5	13.0	23.0	15.0	20.0	14.0
3	---	---	13.5	8.0	20.5	12.0	16.5	13.0	23.5	16.0	19.5	15.0
4	---	---	11.0	6.5	21.0	13.0	19.0	11.5	24.0	17.5	15.5	13.5
5	---	---	12.5	5.0	22.0	13.5	20.0	12.0	23.5	16.0	14.0	13.0
6	---	---	14.0	5.5	22.0	14.0	21.0	12.5	24.0	16.5	15.5	12.5
7	---	---	15.5	7.0	21.5	13.5	22.0	14.0	25.0	17.5	14.0	12.0
8	---	---	16.5	8.0	22.0	13.5	22.5	15.0	25.5	18.0	13.5	11.0
9	---	---	14.5	10.5	17.0	14.0	21.0	13.5	25.0	17.5	13.0	12.5
10	---	---	13.0	9.5	15.0	12.5	20.5	13.0	23.5	17.0	13.0	11.5
11	---	---	13.0	9.0	19.0	10.5	20.0	12.0	22.5	16.0	13.5	11.0
12	---	---	11.0	8.0	18.5	13.0	21.0	12.5	18.5	16.0	14.5	9.5
13	---	---	14.0	9.5	16.0	12.5	22.5	14.0	18.5	14.5	12.5	11.0
14	---	---	12.0	10.0	16.0	11.0	23.5	15.5	20.0	12.5	15.0	10.5
15	---	---	11.5	8.5	17.0	9.5	21.0	16.0	17.0	14.0	15.0	10.5
16	---	---	13.5	8.0	19.0	10.0	19.5	14.5	16.5	13.5	14.0	9.5
17	---	---	15.5	7.0	20.5	11.0	21.0	13.0	18.0	11.5	11.0	9.5
18	---	---	17.0	8.5	15.5	12.5	22.0	13.5	19.0	11.5	10.5	8.0
19	---	---	17.5	10.5	20.0	11.0	22.0	14.0	19.5	12.5	11.5	7.0
20	---	---	17.5	10.5	21.0	13.5	22.5	14.5	16.0	13.5	12.5	8.0
21	---	---	17.5	11.0	21.0	14.0	23.5	15.0	15.0	14.0	12.5	10.0
22	---	---	14.5	8.0	20.5	12.0	22.5	15.0	15.5	13.0	13.5	9.0
23	---	---	11.5	7.5	16.5	13.0	24.5	16.5	16.0	12.0	14.5	9.5
24	10.5	---	9.0	7.5	15.0	12.5	24.5	16.5	15.0	13.5	15.5	10.5
25	11.0	8.5	12.0	7.0	15.5	10.5	24.0	17.0	16.5	12.5	15.0	11.0
26	9.5	8.0	11.5	8.0	19.5	10.5	25.0	19.0	18.0	12.0	16.0	11.0
27	11.5	7.5	14.5	9.5	21.0	12.0	23.5	16.0	18.5	12.0	15.5	12.5
28	12.0	8.0	17.5	9.5	18.5	14.5	23.0	15.5	19.5	13.0	15.0	10.5
29	13.0	6.5	17.0	8.5	17.5	14.5	23.0	15.0	20.0	14.0	15.0	10.0
30	10.5	8.0	16.5	8.5	21.0	13.5	23.5	16.0	19.5	15.5	15.0	10.5
31	---	---	18.0	9.0	---	---	23.0	15.5	19.5	15.0	---	---
MONTH	13.0	6.5	18.0	5.0	22.0	9.5	25.0	11.5	25.5	11.5	20.0	7.0

14338000 ELK CREEK NEAR TRAIL, OR

LOCATION.--Lat 42°39'50", long 122°44'50", in SW¼ sec.30, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 3.3 mi (5.3 km) northeast of Trail and at mile 0.4 (0.6 km).

DRAINAGE AREA.--133 mi² (344 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year. Prior to March 1946 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,456.56 ft (443.959 m) National Geodetic Vertical Datum of 1929. Prior to July 5, 1946, nonrecording gage at various sites within 1.0 mi (1.6 km) of present site at different datums. July 5, 1946, to June 22, 1950, nonrecording gage, and June 23, 1950, to May 23, 1954, water-stage recorder, at site 0.3 mi (0.5 km) upstream at datum 12.14 ft (3.700 m) higher.

REMARKS.--Water-discharge records good. No regulation. Diversions above station for irrigation.

AVERAGE DISCHARGE.--33 years, 233 ft³/s (6.599 m³/s), 168,800 acre-ft/yr (208 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,200 ft³/s (544 m³/s) Dec. 22, 1964, gage height, 18.84 ft (5.742 m), from rating curve extended above 4,700 ft³/s (133 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.40 ft³/s (0.011 m³/s) Aug. 16, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s (76.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 24	1400	3,760	106	8.33	2.539
Dec. 14	2030	*5,240	148	*9.50	2.896
Feb. 3	0930	2,760	78.2	7.33	2.234

Minimum, 3.5 ft³/s (0.10 m³/s) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	37	382	418	169	130	119	123	40	32	6.0	9.0
2	17	33	386	365	422	121	119	111	36	33	5.8	8.1
3	14	31	1430	344	2210	115	117	101	35	33	5.6	7.7
4	12	27	923	314	1210	121	136	92	32	29	5.4	8.1
5	11	29	585	395	770	125	233	86	30	25	5.5	13
6	11	77	427	480	601	134	327	80	28	22	5.7	18
7	14	74	340	485	993	125	269	74	26	19	5.3	20
8	13	51	277	404	1350	233	222	69	26	17	4.7	18
9	11	38	226	373	942	365	193	65	24	15	4.2	20
10	11	30	189	378	674	310	174	64	30	15	3.8	75
11	9.9	26	322	344	510	258	153	67	37	14	3.8	101
12	9.4	22	510	322	413	226	136	65	29	13	4.4	52
13	9.0	20	1050	314	340	212	125	60	29	12	5.4	35
14	9.9	20	3540	310	281	196	115	59	26	8.6	5.8	31
15	8.6	39	2880	327	269	174	109	65	25	10	6.5	28
16	8.1	136	1490	776	240	155	107	68	23	12	7.7	23
17	7.3	81	1370	911	229	143	95	61	22	12	8.1	21
18	7.3	57	867	733	306	132	86	56	26	7.7	7.7	35
19	6.9	44	580	591	344	123	81	52	38	7.7	7.3	37
20	6.9	34	422	490	336	113	86	47	27	8.6	6.9	29
21	7.3	45	361	432	306	109	92	38	23	8.6	8.6	23
22	7.3	607	373	409	266	121	95	42	20	7.7	12	20
23	7.3	526	465	365	236	134	99	43	19	7.3	12	18
24	7.7	2680	591	314	209	186	101	51	20	6.9	11	17
25	39	2160	500	273	186	166	115	75	23	6.9	37	15
26	72	2270	395	251	169	146	134	64	20	7.3	24	14
27	34	1150	418	219	155	132	158	60	18	6.9	15	13
28	22	770	490	193	141	121	148	52	18	6.4	12	13
29	18	569	470	171	---	117	132	47	78	6.2	11	12
30	44	490	574	155	---	128	128	43	43	6.1	9.9	12
31	49	---	526	143	---	113	---	41	---	6.1	9.4	---
TOTAL	528.9	12173	23359	11999	14277	4984	4204	2021	871	422.0	277.5	745.9
MEAN	17.1	406	754	387	510	161	140	65.2	29.0	13.6	8.95	24.9
MAX	72	2680	3540	911	2210	365	327	123	78	33	37	101
MIN	6.9	20	189	143	141	109	81	38	18	6.1	3.8	7.7
AC-FT	1050	24150	46330	23800	28320	9890	8340	4010	1730	837	550	1480

CAL YR 1977 TOTAL 50161.8 MEAN 137 MAX 3540 MIN 1.8 AC-FT 99500
WTR YR 1978 TOTAL 75862.3 MEAN 208 MAX 3540 MIN 3.8 AC-FT 150500

14338000 ELK CREEK NEAR TRAIL, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: June 1973 to current year.
TURBIDITY: January 1973 to current year.

INSTRUMENTATION.—Hach Surface Scatter 4 turbidimeter since January 1973. Enviro-Lab temperature unit since June 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: Maximum, 30.5°C July 24, 26, Aug. 7, 8, 1978; minimum recorded, 0.0°C many days during December 1976 to February 1977, Nov. 20-22, 1977.
TURBIDITY: Maximum recorded, 1,000 JTU (upper limit of meter) Sept. 14, 1975, but may have been higher; minimum, 0 JTU at times.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum, 30.5°C July 24, 26, Aug. 7, 8; minimum, 0.0°C Nov. 20-22.
TURBIDITY: Maximum, 210 JTU Dec. 14; minimum, 0 JTU many days.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT								
13...	1340	9.0	13.0	8.0	10.7	216	1	.02
27...	1230	32	10.5	7.9	10.8	149	4	.35
NOV								
11...	1010	25	6.5	7.6	12.1	142	2	.13
23...	1620	409	5.0	--	--	--	10	11
28...	1220	752	7.0	7.4	11.8	59	--	--
DEC								
09...	0930	229	3.5	7.1	11.6	66	4	2.5
14...	1550	4360	--	--	--	--	184	2170
JAN								
06...	0955	485	6.0	7.7	11.5	63	12	16
17...	0945	929	7.5	7.2	--	73	20	50
30...	1500	153	6.5	7.4	11.8	75	2	.83
FEB								
03...	1425	2480	8.0	--	--	--	106	710
14...	1715	277	6.0	7.7	11.4	87	--	--
23...	1305	233	8.0	--	--	--	2	1.3
MAR								
01...	1510	125	6.5	7.8	11.4	100	--	--
15...	1320	174	7.5	7.7	11.0	73	--	--
29...	1515	113	11.5	7.6	10.3	77	3	.92
APR								
06...	1115	327	8.0	7.8	11.7	89	--	--
24...	1430	101	11.0	8.0	10.4	93	2	.55
MAY								
08...	1400	69	16.5	8.2	10.2	96	--	--
10...	1305	64	14.0	--	--	--	2	.35
22...	1000	101	12.5	8.2	9.4	106	4	1.1
JUN								
06...	1045	27	21.0	8.2	9.0	125	2	.15
20...	1345	27	24.0	8.7	9.4	145	--	--
21...	1410	23	22.5	--	--	--	0	.00
JUL								
05...	1230	26	18.5	8.4	9.3	140	2	.14
18...	1330	7.3	24.0	8.6	9.6	170	2	.04
AUG								
03...	1415	5.8	25.5	8.5	10.2	195	3	.05
15...	1230	6.2	19.5	8.6	11.1	197	1	.02
25...	1000	29	--	--	--	--	6	.47
25...	1200	57	--	--	--	--	28	3.1
25...	1430	59	--	--	--	--	11	1.8
25...	1515	56	--	--	--	--	7	1.1
29...	1220	11	21.5	8.4	10.1	179	2	.06
SEP								
09...	1630	20	--	--	--	--	9	.49
09...	1830	22	--	--	--	--	4	.24
09...	2030	23	--	--	--	--	5	.31
09...	2230	26	--	--	--	--	4	.28
10...	0030	30	--	--	--	--	7	.57
10...	0230	35	--	--	--	--	6	.57
SEP								
10...	0430	42	--	--	--	--	9	1.0
10...	0630	52	--	--	--	--	11	1.5
10...	0830	60	--	--	--	--	13	2.1
10...	1030	62	--	--	--	--	11	1.8
10...	1230	68	--	--	--	--	11	2.0
10...	1430	80	--	--	--	--	22	4.8
13...	1245	35	14.0	7.9	9.8	146	4	.38
28...	1400	13	18.0	8.1	9.7	172	2	.07

14338000 ELK CREEK NEAR TRAIL, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
DEC 14...	1550	4360	184	2170	20	28	35

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM
DEC 14...	44	57	70	84	93	100

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.0	10.0	12.0	9.5	7.5	6.5	5.5	4.5	6.5	5.5	7.0	4.0
2	15.5	10.5	12.0	9.5	8.5	7.5	6.5	5.5	6.0	5.5	7.0	5.5
3	16.0	10.5	9.0	6.5	8.5	8.0	7.0	6.5	8.0	6.0	9.5	6.5
4	16.0	10.5	7.5	6.0	9.0	7.5	7.0	6.0	8.0	7.0	9.5	7.5
5	16.0	12.0	9.0	7.0	7.5	6.0	7.0	6.5	8.5	7.5	8.5	8.0
6	14.0	12.0	9.5	8.0	8.0	6.5	7.0	6.0	8.0	6.5	10.0	7.5
7	15.5	11.0	9.0	7.5	8.0	6.0	7.0	5.5	7.5	7.0	9.0	8.0
8	15.0	10.0	7.5	5.0	5.5	4.0	8.0	7.0	7.5	6.5	8.5	8.0
9	14.0	9.0	6.0	3.5	5.5	3.5	8.0	7.5	7.5	6.0	9.0	7.5
10	14.5	9.0	6.5	4.5	6.0	4.5	8.5	7.5	6.0	5.0	8.5	6.5
11	15.0	9.5	8.0	6.0	7.0	6.0	7.0	6.5	6.0	4.0	8.0	7.0
12	15.5	10.5	7.5	5.5	7.5	7.0	7.5	7.0	5.5	4.0	8.0	6.0
13	16.0	11.5	9.0	7.5	8.5	7.5	8.0	7.5	6.5	4.5	8.0	6.0
14	15.0	11.0	9.0	8.0	9.0	8.5	8.0	7.5	6.5	5.0	7.5	5.0
15	15.5	11.0	10.5	9.0	8.5	7.0	8.0	7.5	6.5	5.5	8.0	4.5
16	16.0	11.5	9.0	6.5	7.0	6.5	8.0	7.0	5.5	4.5	9.5	5.5
17	15.5	11.0	7.0	5.0	7.0	6.0	8.0	7.5	6.0	5.0	10.0	6.5
18	15.5	10.5	5.0	3.5	7.0	6.0	8.0	7.5	8.5	6.0	11.5	7.5
19	15.0	11.0	4.0	2.5	6.0	4.5	8.0	7.0	8.5	6.0	12.0	8.0
20	13.0	10.5	2.0	.0	5.5	4.5	8.5	7.5	8.5	6.0	12.5	8.5
21	13.5	9.5	1.0	.0	6.5	5.5	8.0	7.5	9.5	6.5	13.0	9.5
22	12.0	8.5	4.0	.0	7.0	6.0	8.0	6.5	9.5	6.5	12.0	10.5
23	12.0	10.5	5.0	4.0	7.5	6.5	6.5	5.0	9.0	7.0	11.0	9.0
24	13.5	11.0	6.5	4.5	7.5	6.5	5.5	4.5	9.0	7.5	9.0	7.5
25	13.5	11.5	7.5	7.0	6.5	5.0	6.5	5.0	9.0	7.5	11.0	7.0
26	12.5	10.0	8.0	7.0	6.5	5.5	7.5	6.5	9.0	7.0	12.5	8.5
27	11.0	9.0	8.0	7.0	7.0	6.0	6.5	5.5	8.5	5.5	13.5	9.0
28	10.0	9.0	7.5	7.0	7.5	6.5	7.0	5.5	7.5	4.5	13.0	9.5
29	10.0	9.0	9.0	7.5	7.5	7.0	7.5	6.5	---	---	11.5	9.5
30	11.0	9.0	8.5	7.5	7.0	6.0	7.0	5.5	---	---	13.0	10.0
31	10.5	9.0	---	---	6.0	5.0	7.0	6.0	---	---	11.5	9.5
MONTH	16.0	8.5	12.0	.0	9.0	3.5	8.5	4.5	9.5	4.0	13.5	4.0

14338000 ELK CREEK NEAR TRAIL, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.0	9.0	---	---	---	---	23.0	16.0	28.0	19.5	25.0	18.0
2	9.5	7.5	---	---	---	---	20.0	17.0	28.5	20.0	25.0	18.5
3	9.0	7.0	---	---	---	---	20.0	16.5	29.0	21.0	23.5	19.5
4	9.5	7.0	---	---	---	---	22.5	15.0	29.0	22.5	21.0	17.5
5	8.0	6.5	---	---	---	---	24.0	16.5	28.5	21.0	17.0	16.0
6	---	---	---	---	---	---	25.5	17.5	29.5	21.5	18.5	15.5
7	---	---	---	---	---	---	26.5	19.0	30.5	22.5	19.0	15.5
8	---	---	18.5	---	---	---	27.5	20.0	30.5	23.5	17.0	14.0
9	---	---	17.0	14.0	---	---	26.0	18.5	30.0	22.5	16.0	15.0
10	---	---	15.5	12.5	---	---	25.5	18.0	28.0	22.0	15.5	14.0
11	---	---	15.0	11.5	---	---	25.5	17.0	27.0	20.5	17.0	12.5
12	---	---	13.0	10.5	---	---	26.5	17.5	24.0	21.0	17.5	12.0
13	---	---	15.5	11.0	---	---	28.0	19.0	22.5	19.0	16.0	14.0
14	---	---	14.0	12.0	---	---	29.5	20.5	24.5	17.0	18.0	13.0
15	---	---	13.5	10.5	---	---	26.0	21.5	22.0	18.5	18.5	13.5
16	---	---	---	---	---	---	24.5	19.0	19.5	17.0	17.5	13.0
17	---	---	---	---	---	---	26.5	18.0	23.0	15.5	15.5	12.5
18	---	---	---	---	---	---	27.0	18.0	24.0	16.0	14.5	11.5
19	---	---	---	---	---	---	28.0	19.0	24.0	17.0	15.0	9.0
20	---	---	---	---	---	---	28.5	19.0	21.0	18.0	16.0	10.5
21	---	---	---	---	26.5	19.5	29.0	19.5	19.0	17.5	16.5	13.0
22	---	---	---	---	25.0	17.5	28.5	20.0	20.0	16.0	17.5	12.0
23	---	---	---	---	22.0	18.0	30.0	21.5	20.0	15.5	19.0	13.0
24	---	---	---	---	19.0	17.0	30.5	21.5	18.5	17.0	20.0	14.5
25	---	---	---	---	19.5	15.0	29.5	22.5	20.5	16.0	19.0	15.0
26	---	---	---	---	23.5	14.5	30.5	23.5	22.0	16.0	20.0	14.5
27	---	---	---	---	26.0	17.0	29.0	21.0	23.5	16.5	20.0	16.0
28	---	---	---	---	24.0	19.5	29.0	20.0	24.5	17.0	19.5	14.5
29	---	---	---	---	20.0	17.5	29.0	20.5	25.5	18.5	19.5	13.5
30	---	---	---	---	23.5	16.5	28.5	21.0	25.0	20.0	19.0	14.5
31	---	---	---	---	---	---	28.5	20.5	24.5	19.0	---	---
MONTH	10.0	6.5	18.5	10.5	26.5	14.5	30.5	15.0	30.5	15.5	25.0	9.0

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6	3	4	1	1	1	---	---	---	4	3	4
2	7	3	3	1	1	1	---	---	---	7	3	4
3	6	1	2	1	1	1	---	---	---	4	3	4
4	1	1	1	1	1	1	---	---	---	3	2	3
5	1	1	1	1	1	1	---	---	---	35	2	15
6	1	1	1	10	1	4	---	---	---	10	7	9
7	1	1	1	5	1	2	---	---	---	9	5	7
8	1	1	1	4	1	1	---	---	---	5	4	5
9	1	1	1	8	1	2	---	---	---	8	3	4
10	1	1	1	1	1	1	---	---	---	6	3	4
11	1	1	1	1	1	1	---	---	---	3	2	3
12	1	1	1	1	1	1	---	---	---	5	2	4
13	1	1	1	1	1	1	85	---	---	7	2	4
14	1	1	1	1	1	1	210	55	110	5	2	3
15	1	1	1	5	1	1	160	30	75	15	2	4
16	1	1	1	20	4	10	30	1	20	30	15	20
17	1	1	1	4	1	2	30	15	20	15	10	15
18	1	1	1	1	1	1	15	9	10	10	8	9
19	1	1	1	1	1	1	9	6	7	8	5	7
20	1	1	1	1	1	1	7	5	6	7	4	5
21	1	1	1	10	1	2	6	4	4	10	4	5
22	1	1	1	75	9	45	4	4	4	9	3	5
23	1	1	1	30	15	20	10	5	7	4	2	3
24	5	1	1	160	35	100	9	6	8	3	2	2
25	6	1	2	45	15	25	15	4	5	3	2	2
26	20	4	10	85	15	45	4	3	3	6	1	2
27	7	1	2	30	15	20	9	3	5	2	1	1
28	1	1	1	---	---	---	7	4	5	1	1	1
29	1	1	1	---	---	---	7	3	5	1	1	1
30	1	1	1	---	---	---	9	6	7	3	1	1
31	6	1	3	---	---	---	7	4	5	1	1	1
MONTH	20	1	2	160	1	10	210	1	15	35	1	5

14338000 ELK CREEK NEAR TRAIL, OR--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9	1	3	1	1	1	1	1	1	1	1	1
2	75	10	20	1	1	1	1	1	1	1	1	1
3	100	30	70	1	1	1	1	1	1	1	1	1
4	30	15	20	2	1	1	1	1	1	1	1	1
5	20	10	10	1	1	1	20	1	9	1	1	1
6	15	7	9	4	1	2	20	10	15	1	1	1
7	110	6	35	2	1	1	10	5	8	1	1	1
8	30	15	20	10	1	6	6	3	4	1	1	1
9	15	8	10	15	6	9	3	2	2	1	1	1
10	8	5	7	7	4	5	2	1	1	1	1	1
11	5	4	5	4	2	3	6	1	1	1	1	1
12	4	3	4	3	1	2	1	1	1	1	1	1
13	3	3	3	1	1	1	1	1	1	1	1	1
14	3	2	2	2	1	1	1	1	1	1	1	1
15	6	2	4	1	1	1	1	1	1	1	1	1
16	3	2	3	1	1	1	1	1	1	5	1	1
17	4	2	3	1	1	1	1	1	1	1	1	1
18	6	3	4	1	1	1	1	1	1	1	1	1
19	4	4	4	1	1	1	1	1	1	1	1	1
20	4	3	3	1	1	1	1	1	1	1	1	1
21	3	2	2	1	1	1	1	1	1	1	1	1
22	2	1	1	1	1	1	1	1	1	1	1	1
23	1	1	1	3	1	1	1	1	1	1	1	1
24	3	1	1	5	2	3	1	1	1	1	1	1
25	2	1	1	4	1	1	1	1	1	1	1	1
26	1	1	1	1	1	1	1	1	1	1	1	1
27	1	1	1	1	1	1	1	1	1	1	1	1
28	1	1	1	1	1	1	1	1	1	1	1	1
29	---	---	---	3	1	1	1	1	1	1	1	1
30	---	---	---	15	1	5	1	1	1	1	1	1
31	---	---	---	1	1	1	---	---	---	1	1	1
MONTH	110	1	9	15	1	2	20	1	2	5	1	1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	2	0	1	0	0	0	1	1	1
2	---	---	---	3	0	0	0	0	0	7	1	2
3	---	---	---	0	0	0	0	0	0	2	2	2
4	---	---	---	4	0	1	1	0	1	2	2	2
5	---	---	---	0	0	0	4	1	1	2	2	2
6	---	---	---	0	0	0	1	1	1	2	2	2
7	4	1	1	0	0	0	1	1	1	2	2	2
8	1	1	1	0	0	0	1	1	1	3	2	2
9	1	1	1	0	0	0	1	1	1	2	2	2
10	1	1	1	0	0	0	1	1	1	20	2	6
11	---	---	---	0	0	0	1	1	1	20	9	15
12	---	---	---	0	0	0	2	1	1	9	4	6
13	---	---	---	0	0	0	1	1	1	5	2	3
14	---	---	---	2	0	0	2	1	1	2	2	2
15	---	---	---	0	0	0	1	1	1	2	2	2
16	---	---	---	0	0	0	1	1	1	2	2	2
17	---	---	---	0	0	0	1	1	1	2	2	2
18	---	---	---	20	0	1	3	1	1	9	2	4
19	---	---	---	1	0	0	1	1	1	5	2	3
20	---	---	---	0	0	0	4	1	1	3	2	2
21	---	---	---	0	0	0	1	1	1	2	2	2
22	---	---	---	0	0	0	2	1	1	2	2	2
23	---	---	---	0	0	0	1	1	1	2	2	2
24	---	---	---	2	0	0	1	1	1	2	2	2
25	---	---	---	0	0	0	20	1	6	2	2	2
26	---	---	---	3	0	0	30	2	4	2	2	2
27	0	0	0	0	0	0	7	1	2	2	2	2
28	0	0	0	10	0	0	1	1	1	5	2	2
29	170	0	65	0	0	0	3	1	1	2	2	2
30	30	2	10	0	0	0	1	1	1	2	2	2
31	---	---	---	0	0	0	2	1	1	---	---	---
MONTH	170	0	10	20	0	0	30	0	1	20	1	3

14339000 ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT, OR

LOCATION.--Lat 42°31'30", Long 122°50'30", in SE¼ sec.17, T.35 S., R.1 W., Jackson County, Hydrologic Unit 17100307, on right bank 50 ft (15 m) upstream from Dodge Bridge, 0.7 mi (1.1 km) downstream from Reese Creek, 4.3 mi (6.9 km) northwest of Eagle Point, and at mile 138.61 (223.02 km).

DRAINAGE AREA.--1,215 mi^2 (3,147 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1094: 1942(M), 1943, 1945(M), 1946. WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,271.39 ft (387.520 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 21, 1938, nonrecording gage, Dec. 21, 1938, to Aug. 15, 1968, water-stage recorder, at datum 2.27 ft (0.692 m) higher, Aug. 16, 1968, to Sept. 30, 1976, water-stage recorder, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Water-discharge records excellent. Flow regulated since February 1977 by Lost Creek Lake (see station 14335040). Diversions for irrigation above station; most of low flow of Big Butte Creek is diverted near Butte Falls.

AVERAGE DISCHARGE.--40 years, 2,627 ft^3/s (74.40 m^3/s), 1,903,000 acre-ft/yr (2.35 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 87,600 ft^3/s (2,480 m^3/s) Dec. 22, 1964, gage height, 12.78 ft (3.895 m), datum then in use, from rating curve extended above 23,000 ft^3/s (651 m^3/s); minimum, 567 ft^3/s (16.1 m^3/s) Feb. 18, 1977, result of closure of Lost Creek dam, minimum prior to that time 611 ft^3/s (17.3 m^3/s) Aug. 6, 14, 29, Sept. 9, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27,800 ft^3/s (787 m^3/s) Dec. 15, gage height, 10.16 ft (3.097 m); minimum, 1,210 ft^3/s (34.3 m^3/s) Nov. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1280	1310	1890	3620	1570	1370	2170	2320	1810	2130	2200	1750
2	1250	1240	1840	3530	2070	1340	2170	2280	1810	2180	2010	1740
3	1240	1250	5090	3140	8340	1340	2190	2110	1850	2190	2000	1740
4	1240	1230	4920	2830	5930	1350	2230	1870	1840	2170	2010	1750
5	1230	1240	2600	3180	4730	1370	2550	1530	1830	2220	2050	1790
6	1240	1300	2060	3490	3980	1470	2420	1790	1870	2320	2040	1760
7	1240	1300	3110	3200	4500	1440	1800	1750	1890	2310	2010	1560
8	1230	1270	1770	2870	5930	2320	1690	1500	1960	2300	2010	1450
9	1230	1250	1640	2980	4580	2530	1630	1580	2050	2300	2060	1300
10	1260	1230	1550	3270	3170	2220	1590	1460	2190	2310	2050	1390
11	1280	1220	1990	2930	2380	2090	1550	1640	2280	2350	2030	1430
12	1270	1220	2370	2760	2070	2060	1510	1810	2310	2490	2040	1360
13	1260	1220	4660	2850	1900	2000	1490	2130	2320	2570	2060	1370
14	1270	1220	19300	2820	1760	1960	1480	2150	2280	2580	2050	1550
15	1270	1230	23000	3160	1790	1900	1860	2330	2220	2600	2050	1530
16	1270	1330	9500	4430	1700	1850	1880	2490	2130	2600	2060	1510
17	1260	1290	7730	4510	1690	1760	1850	2450	2130	2590	1950	1500
18	1260	1250	4120	4060	1760	1500	1820	2380	2180	2570	1950	1540
19	1260	1250	2990	3730	1750	1470	1810	2130	2220	2530	1890	1540
20	1260	1230	2510	3430	1700	1460	1750	1870	2190	2550	1970	1500
21	1260	1410	2350	3250	1670	1500	1640	1850	2180	2560	2010	1490
22	1250	3020	2190	3230	1650	1590	1820	1850	2170	2570	1750	1480
23	1260	2780	2290	2860	1590	1710	1780	1870	2170	2580	1770	1480
24	1270	7290	2470	2620	1540	2030	1680	2050	2180	2580	1740	1470
25	1330	5530	2280	2460	1510	2310	1840	2180	2170	2580	1830	1480
26	1390	7030	2060	2230	1470	2260	1940	2010	2180	2580	1800	1480
27	1310	5230	2820	1690	1440	2240	2140	1940	2200	2580	1770	1470
28	1280	3720	3870	1640	1410	2210	2370	1950	2160	2590	1760	1430
29	1300	2480	3830	1590	---	2200	2320	1930	2220	2590	1760	1440
30	1360	2200	4390	1560	---	2220	2310	1900	2130	2590	1750	1450
31	1360	---	3990	1520	---	2180	---	1860	---	2480	1750	---
TOTAL	39470	65770	137180	91440	75580	57250	57280	60960	63120	76140	60180	45730
MEAN	1273	2192	4425	2950	2699	1847	1909	1966	2104	2456	1941	1524
MAX	1390	7290	23000	4510	8340	2530	2550	2490	2320	2600	2200	1790
MIN	1230	1220	1550	1520	1410	1340	1480	1460	1810	2130	1740	1300
AC-FT	78290	130500	272100	181400	149900	113600	113600	120900	125200	151000	119400	90710

CAL YR 1977 TOTAL 542214 MEAN 1486 MAX 23000 MIN 640 AC-FT 1075000
WTR YR 1978 TOTAL 830100 MEAN 2274 MAX 23000 MIN 1220 AC-FT 1647000

14339000 ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1973 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 20.0°C July 27, 28, 1975; minimum, 0.0°C Jan. 6-8, 10, 11, 1974, Jan. 6-9, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 18.0°C July 6, 7, but may have been higher during period of no record in August and September; minimum, 3.5°C Nov. 21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT								
13...	1500	1260	13.5	8.9	12.1	76	--	--
17...	1125	1260	11.0	--	--	--	2	6.8
27...	1330	1310	10.5	8.4	11.6	74	3	11
NOV								
11...	1100	1230	8.5	8.0	12.2	79	0	.00
28...	1540	3320	7.0	7.7	11.7	66	--	--
DEC								
09...	1100	1640	5.0	7.5	11.3	67	6	27
20...	1430	2470	4.5	7.6	13.0	61	--	--
JAN								
06...	1330	3630	6.5	8.2	11.5	58	18	176
17...	1400	4580	7.0	7.9	--	64	16	198
31...	1400	1520	6.5	8.0	12.5	51	--	--
FEB								
02...	1435	1930	--	--	--	--	10	52
03...	1530	9370	7.0	--	--	--	145	3670
14...	1815	1960	6.0	7.7	11.7	85	--	--
23...	1430	1580	7.5	--	--	--	2	8.5
MAR								
01...	1600	1340	6.5	8.0	11.9	83	--	--
31...	0945	2200	7.0	7.9	11.5	59	4	24
APR								
06...	1525	2590	8.0	8.1	12.0	67	--	--
25...	1430	1850	11.0	8.2	--	68	--	--
28...	1500	2370	10.5	8.2	11.0	60	4	26
MAY								
01...	0900	2310	8.0	7.8	11.2	61	--	--
08...	1520	1240	13.5	8.1	11.2	61	--	--
10...	1530	1260	11.5	--	--	--	3	10
23...	0945	1860	9.0	7.3	9.8	54	--	--
JUN								
06...	1140	1880	12.0	7.6	9.3	57	2	10
20...	1415	2190	15.0	8.1	10.1	61	--	--
21...	1100	2180	12.0	--	--	--	2	12
JUL								
05...	1330	2180	15.5	8.2	10.2	65	--	--
19...	0930	2530	12.5	7.6	9.3	61	3	20
AUG								
04...	1415	1990	15.0	7.7	10.7	63	2	11
15...	1300	2030	14.0	7.9	10.2	62	2	11
29...	1300	1740	15.5	7.8	10.0	63	3	14
SEP								
14...	1330	1530	13.0	8.1	11.2	66	--	--
28...	1440	1410	12.5	8.2	11.1	66	--	--

14339000 ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	11.5	9.5	7.0	6.0	5.5	4.5	6.0	5.0	7.0	4.5
2	---	---	11.5	9.5	8.0	7.0	5.5	5.0	6.0	5.0	6.5	5.0
3	---	---	10.0	8.0	8.0	7.5	6.0	5.5	7.5	6.0	8.0	6.0
4	---	---	9.0	7.5	7.5	7.0	5.5	5.0	6.5	6.0	8.0	6.5
5	---	---	9.5	8.5	7.0	6.0	6.0	5.5	7.0	6.0	7.5	6.5
6	---	---	10.5	8.5	7.0	6.0	6.5	5.5	7.0	5.5	8.5	6.5
7	---	---	10.0	8.5	7.0	6.0	6.0	5.0	7.0	6.5	7.5	6.5
8	---	---	9.0	7.0	6.0	5.0	7.0	5.5	6.5	5.5	7.5	6.5
9	---	---	8.5	6.5	5.5	4.5	6.5	6.0	6.5	5.5	9.0	6.5
10	---	---	9.0	7.0	6.0	5.0	7.0	6.0	6.0	4.5	7.5	6.5
11	---	---	9.0	8.0	6.5	5.5	6.0	5.5	5.5	4.0	7.5	6.0
12	---	---	9.5	7.0	6.5	6.0	6.0	5.5	5.5	4.0	7.5	5.5
13	---	---	10.0	8.0	7.5	6.5	6.5	6.0	6.5	4.5	8.0	6.0
14	---	---	9.5	8.5	7.5	7.0	6.5	6.0	6.0	5.0	8.0	5.0
15	---	---	10.0	8.5	7.5	5.5	6.5	6.0	6.5	5.5	8.0	4.5
16	---	---	9.5	8.0	6.0	5.5	7.0	6.0	5.5	4.5	9.0	5.0
17	13.5	---	8.5	7.0	6.0	5.5	7.0	6.0	6.0	5.0	9.0	5.5
18	13.5	10.5	7.5	6.0	6.0	5.5	6.5	6.0	8.0	6.0	9.5	6.0
19	13.0	10.5	7.5	6.0	5.5	4.5	6.5	6.0	8.0	6.0	10.0	6.5
20	12.0	10.0	6.0	4.5	5.0	4.0	7.0	6.0	8.0	5.5	10.0	6.5
21	---	9.5	6.5	3.5	6.0	5.0	6.5	6.0	8.5	6.0	10.0	7.0
22	---	---	6.0	4.0	6.5	5.5	6.5	5.0	8.5	6.0	10.0	7.5
23	---	---	5.5	4.0	6.5	6.0	5.5	4.5	8.0	6.0	8.0	7.0
24	---	---	6.0	4.5	7.0	6.0	5.5	4.0	8.5	6.5	7.5	6.5
25	---	---	7.0	6.0	5.5	4.5	6.0	4.5	8.5	6.0	9.0	6.0
26	---	---	7.5	7.0	5.5	4.5	6.5	5.5	8.0	6.0	9.5	6.5
27	11.0	---	7.0	6.5	6.0	5.0	5.5	5.0	8.0	5.0	10.0	6.5
28	10.5	9.5	7.0	6.5	6.0	5.5	6.5	5.0	7.5	4.5	10.0	6.5
29	10.5	9.5	7.5	6.5	6.5	5.5	7.0	5.5	---	---	8.0	6.5
30	11.0	9.5	8.0	7.0	6.0	5.5	6.5	5.0	---	---	10.0	7.0
31	11.0	9.5	---	---	5.5	4.5	6.5	5.5	---	---	8.0	6.5
MONTH	13.5	9.5	11.5	3.5	8.0	4.0	7.0	4.0	8.5	4.0	10.0	4.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	6.5	12.0	8.0	15.0	10.0	16.0	13.0	15.0	9.5	---	---
2	8.5	6.0	12.0	8.0	15.5	10.0	15.0	12.5	15.5	10.0	---	---
3	7.5	6.0	12.0	8.5	16.0	10.0	15.0	13.0	16.0	10.5	---	---
4	8.5	6.0	12.0	8.0	16.0	10.5	17.0	12.0	16.0	10.5	---	---
5	7.0	6.0	13.0	7.5	16.5	10.5	17.5	12.5	16.0	11.0	---	---
6	8.5	6.0	12.5	8.0	16.0	11.0	18.0	12.5	16.5	11.0	---	---
7	9.5	6.0	13.5	8.5	16.0	10.5	18.0	13.0	---	---	---	---
8	10.0	6.5	14.5	8.5	16.0	10.5	17.5	12.5	---	---	---	---
9	11.0	6.5	13.0	9.5	14.0	10.5	17.5	12.0	---	---	---	---
10	12.0	7.5	12.5	9.5	13.5	10.5	17.0	12.5	---	---	---	---
11	12.0	8.0	12.0	9.0	15.5	10.0	17.0	12.0	---	---	---	---
12	12.0	7.5	11.5	9.0	14.5	10.5	17.0	12.0	---	---	---	---
13	10.5	7.5	12.0	9.0	14.0	10.5	17.5	12.5	---	---	---	---
14	9.0	7.5	10.5	9.0	14.0	10.5	17.5	12.5	---	---	14.0	---
15	8.5	7.5	11.0	8.5	14.5	10.0	15.5	12.5	---	---	14.0	10.0
16	9.5	7.0	12.5	8.0	15.5	10.0	15.5	12.0	---	---	13.5	10.0
17	9.5	7.0	13.5	8.5	16.0	10.5	17.0	12.0	---	---	12.5	10.0
18	11.5	7.5	13.5	9.0	13.0	11.0	17.0	11.5	---	---	12.5	10.0
19	9.5	7.5	14.5	9.5	16.0	10.5	17.0	12.0	---	---	14.5	10.0
20	10.0	7.5	15.0	9.5	16.5	11.5	16.5	12.0	---	---	15.0	11.0
21	10.5	7.5	14.0	10.0	16.5	11.5	16.0	11.5	---	---	14.0	11.5
22	9.5	7.5	13.0	8.5	16.5	11.0	14.0	9.5	---	---	13.5	9.5
23	10.5	7.5	11.5	8.5	14.0	11.0	15.0	10.0	---	---	14.0	9.5
24	10.0	8.0	10.5	8.5	13.5	11.5	15.0	9.5	---	---	14.0	10.0
25	11.0	8.5	12.5	8.5	14.5	11.0	15.0	10.0	---	---	13.0	10.5
26	9.5	8.5	11.5	9.0	16.5	11.0	15.5	10.5	---	---	14.0	10.0
27	11.5	8.0	13.5	9.5	17.0	11.0	15.0	10.0	---	---	13.5	10.5
28	10.5	8.5	14.5	9.5	15.5	12.0	15.0	10.0	---	---	13.5	10.0
29	12.0	8.0	14.5	9.5	15.0	11.5	15.0	10.0	---	---	13.5	9.5
30	10.5	8.5	14.5	9.0	17.5	12.5	15.5	10.0	---	---	13.5	10.0
31	---	---	15.0	9.5	---	---	15.5	10.0	---	---	---	---
MONTH	12.0	6.0	15.0	7.5	17.5	10.0	18.0	9.5	16.5	9.5	15.0	9.5

14341500 SOUTH FORK LITTLE BUTTE CREEK NEAR LAKECREEK, OR

LOCATION.--Lat 42°24'30", long 122°36'00", in SE¼ sec.29, T.36 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on left bank 0.5 mi (0.8 km) upstream from intake of Rogue River Valley Canal, 1.4 mi (2.3 km) southeast of Lakecreek, and at mile 18.1 (29.1 km).

DRAINAGE AREA.--138 mi^2 (357 km^2).

PERIOD OF RECORD.--April 1921 to current year.

REVISED RECORDS.--WSP 934: 1925(M). WSP 1398: 1922, 1927(M), 1937, 1941-42.

GAGE.--Water-stage recorder. Altitude of gage is 1,725 ft (526 m), by barometer. Supplementary nonrecording gage at site 25 ft (8 m) upstream used Jan. 12 to Sept. 6, 1965. Apr. 15 to June 17, 1921, nonrecording gage, and June 18, 1921, to Sept. 6, 1965, water-stage recorder at site 75 ft (23 m) upstream at datum 5.0 ft (1.52 m) lower.

REMARKS.--Records good. No regulation. Diversions for irrigation above station; also, in December 1958 Dead Indian collection canal began diverting above station from Code Creek and Dead Indian Creek and in December 1959 South Fork Little Butte collection canal began diverting above station from South Fork Little Butte Creek, Daley Creek, and Beaver Dam Creek. These are transbasin diversions to Howard Prairie Reservoir in Klamath River basin, but eventually this water is diverted back to Rogue River basin for irrigation of lands in the Ashland-Medford area and power development enroute.

AVERAGE DISCHARGE.--57 years, 105 ft^3/s (2.974 m^3/s), 76,070 acre-ft/yr (93.8 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,660 ft^3/s (217 m^3/s) Dec. 2, 1962, gage height, 8.35 ft (2.545 m), site and datum then in use; minimum, 2.0 ft^3/s (0.057 m^3/s) Aug. 10, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s (14.2 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 26	0100	1,120	31.7	7.32	2.231
Dec. 15	0300	*1,380	39.1	*7.41	2.259
Feb. 7	1530	573	16.2	6.68	2.036

Minimum, 13 ft^3/s (0.37 m^3/s) Oct. 13-16, 19, 20, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	18	114	148	88	88	73	108	57	43	16	27
2	21	23	108	136	88	88	75	93	56	43	17	25
3	17	25	304	133	180	86	73	86	56	51	17	23
4	15	22	378	120	136	83	88	79	56	46	17	25
5	14	21	240	148	124	86	140	75	52	41	17	30
6	14	31	185	133	130	98	127	72	52	38	17	40
7	14	30	167	114	302	83	108	64	51	37	16	42
8	14	25	152	108	252	136	100	60	48	37	16	42
9	14	23	127	130	234	194	100	59	46	36	17	34
10	14	22	114	155	189	144	105	59	49	34	16	36
11	14	21	244	152	159	156	105	56	52	33	17	45
12	14	21	257	140	140	163	98	54	46	32	16	45
13	13	21	263	133	127	156	93	51	45	29	16	38
14	13	21	650	136	114	136	88	49	45	29	18	45
15	13	21	1050	144	117	124	88	59	43	28	23	45
16	13	21	510	213	114	108	88	60	42	28	27	42
17	14	21	476	213	111	105	83	57	41	28	27	41
18	14	21	340	213	108	100	79	51	46	28	27	49
19	13	21	246	199	117	95	77	48	51	28	24	56
20	13	19	194	171	117	91	79	45	43	28	23	48
21	14	33	171	171	114	91	79	56	42	27	25	43
22	14	158	163	180	114	88	77	57	41	25	41	36
23	14	111	171	152	111	111	75	56	40	23	36	31
24	13	280	159	133	111	88	70	64	41	23	29	28
25	21	273	133	124	108	81	86	98	41	17	29	27
26	24	574	120	124	103	75	171	91	40	17	29	26
27	20	269	167	111	98	72	163	79	36	17	29	26
28	18	189	180	105	95	70	133	73	36	17	27	24
29	17	148	171	103	---	68	117	70	60	16	26	24
30	17	133	229	95	---	68	111	64	49	16	26	22
31	18	---	175	93	---	66	---	60	---	17	28	---
TOTAL	486	2616	7958	4430	3801	3198	2949	2053	1403	912	709	1065
MEAN	15.7	87.2	257	143	136	103	98.3	66.2	46.8	29.4	22.9	35.5
MAX	25	574	1050	213	302	194	171	108	60	51	41	56
MIN	13	18	108	93	88	66	70	45	36	16	16	22
AC-FT	964	5190	15780	8790	7540	6340	5850	4070	2780	1810	1410	2110

CAL YR 1977 TOTAL 20638.2 MEAN 56.5 MAX 1050 MIN 8.6 AC-FT 40940
WTR YR 1978 TOTAL 31580.0 MEAN 86.5 MAX 1050 MIN 13 AC-FT 62640

14342500 NORTH FORK LITTLE BUTTE CREEK AT FISH LAKE, NEAR LAKECREEK, OR

LOCATION.—Lat 42°22'35", long 122°21'20", in SW¼SW¼ sec.4, T.37 S., R.4 E., Jackson County, Hydrologic Unit 17100307, on right bank 0.5 mi (0.8 km) downstream from Fish Lake dam, 14 mi (23 km) east of Lakecreek, and at mile 15.2 (24.5 km).

DRAINAGE AREA.—20.8 mi^2 (53.9 km^2).

PERIOD OF RECORD.—October 1914 to July 1915, June 1916 to current year. Monthly discharge only November 1916 to May 1917, published in WSP 1318.

REVISED RECORDS.—WSP 654: Drainage area (former site). WSP 1218: 1917(M). WSP 1738: Drainage area.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 4,571.41 ft (1,393.366 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1914, to July 31, 1915, nonrecording gage at site 0.5 mi (0.8 km) upstream at different datum. June 1, 1916, to July 9, 1918, nonrecording gage and July 10, 1918, to Oct. 28, 1932, water-stage recorder at site 0.25 mi (0.40 km) upstream at different datums.

REMARKS.—Records good above 20 ft^3/s (0.57 m^3/s), fair below. Since 1915, Fish Lake (see below) has stored water for irrigation by Medford Irrigation District. Cascade Canal diverts from Fourmile Lake in Klamath River basin and discharges into lava bed 1.0 mi (1.6 km) above Fish Lake; diversion began August 1923. No diversion from creek above station.

AVERAGE DISCHARGE.—62 years (water years 1917-78), 36.3 ft^3/s (1.028 m^3/s), 26,300 acre-ft/yr (32.4 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, about 940 ft^3/s (26.6 m^3/s) June 5, 1917, computed from rate of change in contents of reservoir after break in dam occurred; no flow at times.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 85 ft^3/s (2.41 m^3/s) Aug. 11; maximum gage height, 1.60 ft (0.488 m) Aug. 9, temporary backwater; minimum discharge, 0.68 ft^3/s (0.019 m^3/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	2.5	8.0	15	16	18	23	24	25	26	72	26
2	.76	2.7	8.0	15	16	19	23	25	25	26	81	26
3	.85	2.7	9.6	15	17	19	23	25	24	26	81	26
4	.85	2.9	9.6	15	17	19	23	25	25	26	81	27
5	.95	3.1	9.6	15	17	20	23	25	24	25	81	27
6	1.0	3.2	9.6	15	18	20	23	25	24	25	81	27
7	1.1	3.1	10	15	18	20	23	24	24	25	81	21
8	1.2	3.0	10	15	18	20	23	24	25	25	79	18
9	1.2	3.0	10	15	18	20	23	24	25	25	81	18
10	1.2	3.2	11	15	18	20	22	24	25	29	83	18
11	1.3	3.4	11	15	18	20	23	24	26	34	85	18
12	1.3	3.5	11	15	18	20	23	23	26	35	83	18
13	1.5	3.8	11	15	18	20	23	23	26	35	83	18
14	1.5	4.8	13	15	19	20	23	23	26	42	79	18
15	1.6	6.0	13	15	19	20	23	24	29	60	76	18
16	1.7	5.8	13	15	19	20	23	24	33	69	69	19
17	1.8	6.0	14	15	19	20	23	24	33	67	63	19
18	1.8	6.0	14	16	19	20	23	24	34	67	61	19
19	1.9	6.0	14	16	19	20	23	24	29	67	61	19
20	2.0	6.0	14	16	19	20	23	25	26	72	61	19
21	2.0	6.8	14	16	18	20	23	25	26	83	56	19
22	2.1	6.8	14	16	18	20	23	25	26	83	40	18
23	2.2	7.2	14	16	18	21	23	25	26	81	24	18
24	2.3	8.0	14	16	18	21	23	25	26	81	24	18
25	2.3	8.0	14	16	18	21	24	25	26	79	25	18
26	2.1	8.0	14	16	18	21	24	25	28	76	25	18
27	2.2	8.0	14	16	18	21	24	25	35	74	25	18
28	2.2	8.0	14	16	18	21	24	25	36	72	25	18
29	2.3	8.4	15	16	---	20	24	24	30	70	25	18
30	2.3	8.0	15	16	---	21	24	24	26	70	26	18
31	2.5	---	15	16	---	21	---	25	---	70	26	---
TOTAL	50.77	157.9	380.4	479	504	623	695	756	819	1645	1843	600
MEAN	1.64	5.26	12.3	15.5	18.0	20.1	23.2	24.4	27.3	53.1	59.5	20.0
MAX	2.5	8.4	15	16	19	21	24	25	36	83	85	27
MIN	.76	2.5	8.0	15	16	18	22	23	24	25	24	18
AC-FT	101	313	755	950	1000	1240	1380	1500	1620	3260	3660	1190
(†)	2,750	3,350	4,110	a4,470	a7,750	a5,100	a5,330	a5,290	a6,010	5,150	5,080	a5,210

CAL YR 1977 TOTAL 11065.83 MEAN 30.3 MAX 102 MIN .76 AC-FT 21950
WTR YR 1978 TOTAL 8553.07 MEAN 23.4 MAX 85 MIN .76 AC-FT 16970

† Monthend contents, in acre-feet, of Fish Lake.
a Interpolated.

14343000 NORTH FORK LITTLE BUTTE CREEK NEAR LAKECREEK, OR

LOCATION.--Lat 42°24'10", long 122°32'10", in NW¼ sec.36, T.36 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on right bank 1.2 mi (1.9 km) upstream from Wasson Canyon, 4.9 mi (7.9 km) east of Lakecreek, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--43.8 mi^2 (113.4 km^2).

PERIOD OF RECORD.--September 1911 to March 1913, July to September 1917, May 1922 to December 1964, September 1965 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as "above Medford intake, near Lakecreek" 1922-28, 1931-40. Records for April to September 1916, May 1917 to September 1919, April to September 1921, and October 1923 to September 1924 at site 3 mi (5 km) upstream not equivalent owing to diversions and difference in drainage areas.

REVISED RECORDS.--WSP 1518: 1912-13. WSP 1738: Drainage area (former site).

GAGE.--Water-stage recorder. Concrete control since Oct. 9, 1968. Altitude of gage is 2,160 ft (658 m), from topographic map. Sept. 10, 1911, to Mar. 31, 1913, and July 1 to Sept. 30, 1917, nonrecording gage at site 1,000 ft (305 m) downstream at different datums. May 26, 1922, to Dec. 31, 1964, water-stage recorder at site 1,000 ft (305 m) downstream at datum 2,125.01 ft (664.703 m) above mean sea level.

REMARKS.--Records good. Flow partly regulated since 1915 by Fish Lake (published with station 14342500). Diversions for irrigation above station; some water diverted into Fish Lake from Fourmile Lake, in Klamath River basin, since 1923.

AVERAGE DISCHARGE.--56 years (water years 1912, 1923-64, 1966-78), 71.8 ft^3/s (2.033 m^3/s), 52,020 acre-ft/yr (64.1 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,750 ft^3/s (49.6 m^3/s) Dec. 22, 1964, gage height, 3.70 ft (1.128 m), site and datum then in use; minimum, 11 ft^3/s (0.31 m^3/s) Oct. 29 to Nov. 8, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 254 ft^3/s (7.19 m^3/s) Nov. 25, gage height, 3.78 ft (1.152 m); minimum, 16 ft^3/s (0.45 m^3/s) Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	23	40	58	46	48	49	59	50	47	89	47
2	20	27	40	56	46	47	48	56	50	50	97	47
3	20	24	89	55	65	47	48	55	49	50	97	46
4	20	24	84	52	55	46	55	54	48	47	97	48
5	20	24	63	54	52	47	65	54	48	47	97	52
6	20	32	55	51	54	48	63	55	48	46	97	51
7	20	26	54	50	67	46	59	52	47	46	97	54
8	20	24	50	49	65	54	58	52	47	46	96	42
9	20	24	47	51	65	61	56	52	47	43	94	40
10	20	24	44	52	59	55	55	52	49	46	101	42
11	20	24	61	51	58	61	54	52	48	52	101	46
12	20	24	58	49	54	61	54	52	46	52	101	42
13	20	24	61	49	51	60	51	51	44	51	101	43
14	20	24	94	49	51	55	51	51	46	55	99	44
15	20	26	113	49	55	54	51	55	44	70	97	42
16	20	25	86	51	52	52	52	55	51	80	94	41
17	20	24	94	51	52	52	51	52	50	80	86	40
18	20	24	74	51	58	52	50	51	56	80	88	44
19	20	24	64	51	58	51	52	49	50	78	86	41
20	20	24	58	51	58	49	52	49	46	83	86	40
21	20	33	56	52	56	48	52	50	46	97	89	40
22	20	51	56	55	56	49	51	49	44	97	80	40
23	20	47	58	51	55	51	51	49	44	96	49	40
24	20	84	55	50	54	50	50	58	44	96	47	40
25	24	77	54	50	52	49	58	68	44	94	48	40
26	23	104	51	51	49	49	88	60	47	92	47	40
27	22	64	64	49	48	48	72	56	54	89	47	40
28	22	51	59	49	48	48	64	55	60	88	47	40
29	21	46	63	48	---	46	60	54	58	88	46	40
30	23	43	71	48	---	46	60	52	49	88	48	40
31	23	---	61	46	---	47	---	51	---	88	48	---
TOTAL	638	1095	1977	1579	1539	1577	1680	1660	1454	2162	2497	1292
MEAN	20.6	36.5	63.8	50.9	55.0	50.9	56.0	53.5	48.5	69.7	80.5	43.1
MAX	24	104	113	58	67	61	88	68	60	97	101	54
MIN	20	23	40	46	46	46	48	49	44	43	46	40
AC-FT	1270	2170	3920	3130	3050	3130	3330	3290	2880	4290	4950	2560

CAL YR 1977 TOTAL 20207 MEAN 55.4 MAX 117 MIN 20 AC-FT 40080
WTR YR 1978 TOTAL 19150 MEAN 52.5 MAX 113 MIN 20 AC-FT 37980

14350000 EMIGRANT CREEK NEAR ASHLAND, OR

LOCATION.--Lat 43°09'50", long 122°36'15", in SE¼NE¼ sec.20, T.39 S., R.2 E., Jackson County, Hydrologic Unit 17100309, on left bank 0.1 mi (0.2 km) downstream from Emigrant Dam, 6 mi (10 km) southeast of Ashland, and at mile 29.2 (47.0 km).

DRAINAGE AREA.--64.3 mi^2 (166.5 km^2).

PERIOD OF RECORD.--January to June 1920, October 1920 to July 1922, February 1923 to May 1924 (incomplete), October 1924 to November 1925, February to August 1926, October 1926 to September 1928, April 1929 to September 1930, April 1931 to October 1932 (incomplete), April 1933 to September 1935, April 1936 to September 1939 (incomplete), April 1940 to September 1947, January 1948 to October 1952 (incomplete), December 1952 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1448: 1921, 1927-28, 1937, 1953(M).

GAGE.--Water-stage recorder and artificial control. Datum of gage is 2,042.80 ft (622.645 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Oct. 1, 1926, water-stage recorder or nonrecording gage at several nearby sites at various datums. Oct. 1, 1926, to Feb. 24, 1959, water-stage recorder near present site at datum 10.93 ft (3.331 m) higher. Feb. 25, 1959, to May 7, 1961, water-stage recorder at site 1.0 mi (1.6 km) downstream at different datum.

REMARKS.--Records good. Flow regulated since 1924 by Emigrant Lake (see below). Several diversions above station for irrigation; the principal diversion canals are Ashland lateral and East lateral (see below). From June 1923 to August 1960, water diverted by Keene Creek Canal from Klamath River basin into Emigrant Creek above station. Beginning May 1960, water from Klamath River basin diverted to Emigrant Creek above station via Green Springs powerplant diversion.

AVERAGE DISCHARGE.--38 years (water years 1925, 1927-30, 1934-35, 1941-47, 1954-78), 31.3 ft^3/s (0.886 m^3/s), 22,680 acre-ft/yr (28.0 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,260 ft^3/s (149 m^3/s) Feb. 20, 1927, by computation of peak flow over dam; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 268 ft^3/s (7.59 m^3/s) Mar. 24, gage height, 2.62 ft (0.799 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.20	.00	.10	99	.30	67	.70	9.3	5.1	57	.20
2	.30	.20	.00	.10	84	.30	85	.70	8.0	.20	57	.20
3	.30	.10	.10	.10	52	.30	85	.50	8.0	.20	61	.10
4	.30	.10	.10	.10	52	.30	85	.50	8.0	.20	64	.10
5	.30	.10	.00	.10	52	.30	87	.50	8.0	.20	64	.20
6	.30	.10	.00	.10	24	.20	88	.70	10	.20	64	.20
7	.30	.10	.00	.10	.30	.20	88	.70	13	.10	64	.10
8	.20	.10	.00	.10	.30	.20	91	.70	17	.10	64	.10
9	.20	.00	.00	30	.30	.10	91	.90	17	.10	64	.10
10	.10	.00	.00	58	.30	.10	40	.90	17	.10	63	.10
11	.10	.00	.10	68	.30	.10	.70	.90	18	4.4	63	.10
12	.10	.00	.10	77	.30	.10	.70	4.0	18	8.0	63	.10
13	.00	.00	.10	77	.20	.10	.70	24	18	11	63	.10
14	.00	.00	.10	78	.20	.10	.80	23	18	45	60	.10
15	.00	.00	.10	78	.20	.10	.90	21	18	44	55	.10
16	.00	.00	.10	89	.20	.20	.90	15	18	45	56	.10
17	.00	.00	.10	103	.20	.20	.90	11	18	45	56	.10
18	.00	.00	.00	146	.20	.20	.90	10	18	45	53	.10
19	.00	.00	.00	182	.20	.20	.90	9.3	17	45	48	.10
20	.00	.00	.00	183	.20	.20	.90	10	17	45	48	.10
21	.00	.00	.00	183	.20	.20	.90	10	17	55	41	.20
22	.10	.00	.00	182	.20	55	.90	8.6	16	55	28	.10
23	.10	.00	.00	182	.20	106	.90	6.8	18	55	11	.20
24	.10	.10	.00	182	.20	147	.90	3.4	21	55	.20	.20
25	.10	.10	.00	182	.30	51	.90	.20	21	55	.20	.20
26	.10	.10	.00	182	.40	51	.90	.20	21	55	.20	.20
27	.10	.10	.10	144	.40	45	.90	.20	34	55	.20	.20
28	.10	.10	.10	99	.40	34	.90	5.8	37	55	.20	.20
29	.20	.00	.10	99	---	33	.90	.10	21	55	.20	.20
30	.20	.00	.10	99	---	33	.90	2.3	10	55	.20	.10
31	.20	---	.10	99	---	38	---	9.3	---	54	.20	---
TOTAL	4.00	1.50	1.40	2802.80	368.70	597.00	824.30	181.90	509.3	947.90	1268.60	4.20
MEAN	.13	.050	.045	90.4	13.2	19.3	27.5	5.87	17.0	30.6	40.9	.14
MAX	.30	.20	.10	183	99	147	91	24	37	55	64	.20
MIN	.00	.00	.00	.10	.20	.10	.70	.10	8.0	.10	.20	.10
AC-FT	7.9	3.0	2.8	5560	731	1180	1630	361	1010	1880	2520	8.3
(†)	8,080	12,160	22,420	26,960	33,310	39,000	a38,830	35,880	30,980	23,700	16,140	a16,740
(‡)	0	0	0	0	0	526	5,410	5,590	6,410	7,810	7,100	3,190

CAL YR 1977 TOTAL 4420.00 MEAN 12.1 MAX 71 MIN .00 AC-FT 8770
WTR YR 1978 TOTAL 7511.60 MEAN 20.6 MAX 183 MIN .00 AC-FT 14900

† Monthend contents, in acre-feet, of Emigrant Lake.
‡ Diversion, in acre-feet, by East Lateral.
a Interpolated.

14353000 WEST FORK ASHLAND CREEK NEAR ASHLAND, OR

LOCATION.--Lat 42°08'55", long 122°42'55", near line between NW¼ and SW¼ sec.38, T.39 S., R.1 E., Jackson County, Hydrologic Unit 17100308, in Rogue River National Forest, on left bank 0.3 mi (0.5 km) above city diversion, 2.5 mi (4.0 km) south of Ashland, and at mile 0.4 (0.6 km).

DRAINAGE AREA.--10.5 mi² (27.2 km²), at diversion dam 0.3 mi (0.5 km) downstream.

PERIOD OF RECORD.--September 1924 to January 1933, water years 1954-60, 1963, annual maximum; December 1974 to current year. Monthly discharge only for some periods published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 2,962.75 ft (903.046 m) National Geodetic Vertical Datum of 1929. Sept. 10, 1924, to Jan. 31, 1933, water-stage recorder at site about 0.2 mi (0.3 km) upstream at different datum. Oct. 14, 1953, to Sept. 30, 1963, crest-stage gage at diversion dam 0.3 mi (0.5 km) downstream at different datum.

REMARKS.--Records good except those for period of no gage-height record, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--11 years (water years 1925-32, 1976-78), 8.26 ft³/s (0.234 m³/s), 10.68 in/yr (271 mm/yr), 5,980 acre-ft/yr (7.37 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 330 ft³/s (9.35 m³/s) Dec. 2, 1962, gage height, 15.51 ft (4.727 m), site and datum then in use, from rating curve defined by computation of peak flow over dam; minimum, 1.3 ft³/s (0.037 m³/s) Aug. 29, 1931, Sept. 8, 9, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 15, 1974, is the highest since at least 1900. Discharge, 4,780 ft³/s (135 m³/s) by slope-area measurement of peak flow, gage height, 9.5 ft (2.90 m), from flood marks. Peak believed to be affected by release from debris dams breaking upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 50 ft³/s (1.42 m³/s) and maximum discharge, 54 ft³/s (1.53 m³/s) Nov. 26, gage height, 2.51 ft (0.765 m); minimum, 1.9 ft³/s (0.054 m³/s) Oct. 4-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	2.3	6.0	13	10	10	17	13	15	14	4.1	4.8
2	2.4	3.3	5.2	15	9.8	11	16	13	15	16	4.1	4.4
3	2.1	2.7	11	13	9.8	12	17	13	15	14	3.8	4.1
4	2.0	2.9	16	14	8.7	12	17	13	16	13	4.1	4.8
5	1.9	3.1	11	18	10	13	17	10	16	12	3.8	17
6	2.8	3.1	8.7	17	9.8	13	18	9.8	16	11	3.5	11
7	3.0	2.8	7.8	16	16	16	17	10	17	11	3.5	8.7
8	2.7	2.6	6.4	16	15	25	17	11	17	10	3.5	6.4
9	2.5	2.5	5.5	19	14	23	17	11	16	10	3.5	17
10	2.4	2.5	5.2	19	13	21	19	11	16	10	3.1	14
11	2.4	2.7	19	17	12	19	18	11	15	10	3.1	10
12	2.3	2.6	16	16	12	18	17	11	14	9.8	3.1	7.8
13	2.3	2.6	17	17	12	17	17	13	14	9.8	3.5	8.7
14	2.2	2.7	33	19	11	16	16	14	13	9.2	3.5	11
15	2.1	2.8	36	20	9.8	15	17	14	13	8.2	3.5	8.2
16	2.2	2.5	25	36	9.2	15	16	12	13	8.7	4.8	7.3
17	2.2	2.4	20	36	8.7	15	16	11	12	8.2	6.0	6.8
18	2.1	2.4	17	31	11	15	15	11	13	7.8	7.3	8.2
19	2.2	2.3	14	27	11	15	15	13	12	7.3	6.8	7.8
20	2.3	2.4	12	23	11	14	14	14	11	7.3	6.8	7.3
21	2.5	5.0	13	22	12	15	14	14	12	6.8	10	6.8
22	2.4	7.1	13	20	12	16	13	14	11	6.8	15	6.0
23	2.4	5.2	17	19	13	15	13	14	11	6.0	7.3	5.5
24	2.5	13	14	17	13	15	13	14	11	5.5	6.4	5.2
25	5.3	20	13	17	13	14	14	14	11	5.2	9.2	4.8
26	2.6	26	12	16	13	15	15	14	9.8	5.2	6.8	4.4
27	2.2	12	18	14	12	15	14	14	9.2	5.2	6.4	4.1
28	2.1	8.2	16	14	11	15	13	14	12	4.8	5.5	4.1
29	2.2	8.2	16	13	---	16	13	14	14	4.8	5.2	4.1
30	2.6	7.3	16	12	---	16	13	14	14	4.4	4.8	4.1
31	2.4	---	14	11	---	17	---	15	---	4.4	4.8	---
TOTAL	75.9	165.2	453.8	577	322.8	484	468	393.8	404.0	266.4	166.8	224.4
MEAN	2.45	5.51	14.6	18.6	11.5	15.6	15.6	12.7	13.5	8.59	5.38	7.48
MAX	5.3	26	36	36	16	25	19	15	17	16	15	17
MIN	1.9	2.3	5.2	11	8.7	10	13	9.8	9.2	4.4	3.1	4.1
CFSM	.23	.53	1.39	1.77	1.10	1.49	1.49	1.21	1.29	.82	.51	.71
IN.	.27	.59	1.61	2.04	1.14	1.71	1.66	1.40	1.43	.94	.59	.79
AC-FT	151	328	900	1140	640	960	928	781	801	528	331	445

CAL YR 1977 TOTAL 1723.9 MEAN 4.72 MAX 36 MIN 1.4 CFSM .45 IN 6.11 AC-FT 3420
WTR YR 1978 TOTAL 4002.1 MEAN 11.0 MAX 36 MIN 1.9 CFSM 1.05 IN 14.18 AC-FT 7940

NOTE.--No gage-height record Feb. 20 to Apr. 2.

14353500 EAST FORK ASHLAND CREEK NEAR ASHLAND, OR

LOCATION.--Lat 42°09'10", long 122°42'30", near line between NE¼ and NW¼ sec.28, T.39 S., R.1 E., Jackson County, Hydrologic Unit 17100308, Rogue River National Forest, on left bank 0.1 mi (0.2 km) above city diversion dam, 2.5 mi (4.0 km) south of Ashland, and at mile 0.2 (0.3 km).

DRAINAGE AREA.--8.14 mi^2 (21.1 km^2), at diversion dam 0.1 mi (0.2 km) downstream.

PERIOD OF RECORD.--September 1924 to January 1933, water years 1954-60, 1963, annual maximum; December 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,903.70 ft (885.048 m) National Geodetic Vertical Datum of 1929. Sept. 10, 1924, to Jan. 31, 1933, water-stage recorder at site about 200 ft (61.0 m) downstream at different datum. Oct. 19, 1953, to Sept. 30, 1963, crest-stage gage at diversion dam 0.1 mi (0.2 km) downstream at different datum.

REMARKS.--Records good. No regulation or diversion.

AVERAGE DISCHARGE.--11 years (water years 1925-32, 1976-78), 8.60 ft^3/s (0.244 m^3/s), 14.35 in/yr (364 mm/yr), 6,230 acre-ft/yr (7.68 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 335 ft^3/s (9.49 m^3/s) Dec. 2, 1962, gage height, 5.42 ft (1.652 m), site and datum then in use, from rating curve defined by computations of peak flow over dam; minimum, 0.47 ft^3/s (0.013 m^3/s) Mar. 14, 1977, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 15, 1974, is the highest since at least 1925. Discharge, 5,630 ft^3/s (159 m^3/s) by slope-area measurement of peak flow, gage height, 10.2 ft (3.11 m) from flood marks. Peak believed to be affected by release from debris dams breaking upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 40 ft^3/s (1.13 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 26	0100	71	2.01	2.14	0.652	Dec. 14	0600	*86	2.44	*2.26	0.689

Minimum, 1.6 ft^3/s (0.045 m^3/s) Oct. 14-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.5	6.9	12	10	12	22	15	20	22	6.2	4.5
2	2.2	3.1	6.7	13	10	12	19	15	20	24	6.0	4.3
3	2.3	2.6	11	12	12	12	19	18	21	19	6.0	4.3
4	2.0	2.7	14	12	13	14	18	16	22	19	5.8	4.7
5	2.0	3.1	11	14	14	15	18	16	23	16	5.5	14
6	2.0	3.0	8.9	13	15	15	18	16	24	16	5.3	12
7	2.1	2.8	7.9	12	19	19	19	16	24	16	5.1	10
8	2.0	2.5	6.9	14	18	32	22	17	25	16	4.9	7.0
9	1.9	2.3	6.5	16	16	29	20	17	25	15	4.9	11
10	1.9	2.5	6.2	16	15	26	19	19	25	14	4.7	11
11	1.9	2.7	18	15	15	23	18	19	24	13	4.5	7.8
12	1.7	2.6	14	14	14	21	16	15	23	13	4.5	6.5
13	1.7	2.5	20	15	13	20	16	17	21	12	4.7	6.7
14	1.7	2.6	65	17	12	19	16	17	21	12	4.5	8.5
15	1.6	2.8	55	18	11	18	16	17	20	12	4.5	6.7
16	1.6	2.6	33	28	11	17	15	17	19	12	5.1	6.2
17	1.6	2.2	26	27	11	17	15	17	18	12	4.7	6.0
18	1.5	2.1	21	24	12	17	14	17	19	11	4.5	6.7
19	1.6	2.0	17	21	12	17	15	18	17	10	4.3	6.2
20	1.6	1.9	17	20	12	17	14	19	17	10	4.3	6.0
21	1.6	3.3	16	19	13	18	17	21	17	9.6	7.0	5.8
22	1.6	5.6	15	17	14	20	17	20	17	9.2	8.5	5.3
23	1.6	3.9	16	16	14	19	18	20	17	8.9	5.5	5.1
24	1.7	12	14	15	15	18	18	20	20	8.5	5.1	5.1
25	4.4	14	12	14	15	17	18	20	22	7.5	6.7	4.9
26	2.8	26	12	14	14	18	21	19	21	7.5	5.1	4.7
27	2.3	12	17	13	14	18	21	19	19	7.2	4.9	4.7
28	2.3	8.9	15	12	12	18	19	19	22	7.0	4.5	4.7
29	2.7	9.4	16	11	---	19	18	19	21	6.7	4.5	4.7
30	3.1	8.6	15	11	---	19	19	19	21	6.5	4.5	4.3
31	2.6	---	14	10	---	21	---	19	---	6.5	4.5	---
TOTAL	64.0	154.8	534.0	485	376	577	535	553	625	379.1	160.8	199.4
MEAN	2.06	5.16	17.2	15.6	13.4	18.6	17.8	17.8	20.8	12.2	5.19	6.65
MAX	4.4	26	65	28	19	32	22	21	25	24	8.5	14
MIN	1.6	1.9	6.2	10	10	12	14	15	17	6.5	4.3	4.3
CFSM	.25	.63	2.11	1.92	1.65	2.29	2.19	2.19	2.56	1.50	.64	.82
IN.	.29	.71	2.44	2.22	1.72	2.64	2.44	2.53	2.86	1.73	.73	.91
AC-FT	127	307	1060	962	746	1140	1060	1100	1240	752	319	396

CAL YR 1977 TOTAL 1640.5 MEAN 4.49 MAX 65 MIN 1.6 CFSM .55 IN 7.50 AC-FT 3250
WTR YR 1978 TOTAL 4643.1 MEAN 12.7 MAX 65 MIN 1.6 CFSM 1.56 IN 21.22 AC-FT 9210

14357500 BEAR CREEK AT MEDFORD, OR

LOCATION.--Lat 42°19'40", long 122°52'10", in NW¼ sec.30, T.37 S., R.1 W., Jackson County, Hydrologic Unit 17100308, on left bank 40 ft (12 m) upstream from Main Street Bridge in Medford and at mile 9.91 (15.95 km).

DRAINAGE AREA.--289 mi² (749 km²).

PERIOD OF RECORD.--March 1915 to June 1920 (no low-flow records), October 1920 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1044: 1944. WSP 1448: 1916, 1917(M), 1918-20, 1922, 1924, 1927(M), 1928, 1930. WSP 1568: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,343.98 ft (409.645 m) National Geodetic Vertical Datum of 1929. See WSP 1738 for history of changes prior to Dec. 31, 1947.

REMARKS.--Records good. Flow partly regulated since 1924 by Emigrant Lake (published wiith station 14350000). Numerous diversions for irrigation above station.

AVERAGE DISCHARGE.--58 years (water years 1921-78), 116 ft³/s (3.285 m³/s), 84,040 acre-ft/yr (104 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,500 ft³/s (411 m³/s) Dec. 2, 1962, gage height, 8.04 ft (2.451 m); maximum gage height, about 11.0 ft (3.35 m) Feb. 20, 1927, from floodmarks, present datum, site then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,970 ft³/s (55.8 m³/s) Dec. 15, gage height, 3.38 ft (1.030 m); minimum, 19 ft³/s (0.54 m³/s) Oct. 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	25	99	164	199	106	259	179	43	136	35	32
2	54	47	90	161	199	106	248	167	38	167	37	31
3	51	34	285	152	366	103	248	158	35	113	31	25
4	46	29	353	142	217	108	267	147	32	85	34	32
5	41	31	176	267	179	123	344	126	34	75	34	128
6	46	34	136	217	173	123	385	92	35	75	32	173
7	40	31	116	164	484	111	331	75	31	65	41	158
8	37	28	103	150	391	231	303	67	29	47	41	108
9	34	28	92	189	303	287	299	61	31	40	34	96
10	31	27	85	263	220	192	287	53	35	40	46	128
11	29	25	312	234	182	206	213	61	47	35	41	106
12	28	25	267	227	158	238	196	51	51	35	53	99
13	28	25	339	220	147	231	182	53	37	32	59	96
14	27	25	1110	224	136	206	179	73	35	35	63	113
15	25	25	1460	271	133	176	189	88	35	40	67	92
16	24	25	588	460	126	164	192	85	38	46	88	88
17	23	25	642	405	131	155	182	81	38	58	88	85
18	22	25	380	367	142	147	179	69	43	47	85	103
19	22	23	267	400	144	142	179	67	54	37	77	90
20	22	22	210	367	142	139	179	56	59	34	63	88
21	22	97	185	358	139	182	182	53	44	35	99	85
22	21	413	179	348	133	267	182	67	35	35	176	79
23	21	296	217	331	128	335	164	69	37	37	108	67
24	21	426	176	323	126	323	164	106	35	41	79	61
25	58	295	155	315	123	287	185	111	35	31	96	61
26	40	764	142	319	116	206	206	90	38	35	71	58
27	31	283	267	287	116	203	227	77	35	35	65	41
28	27	176	213	210	111	182	213	65	51	31	51	43
29	24	136	199	203	---	189	203	59	106	35	41	41
30	25	121	307	196	---	217	185	51	118	38	35	51
31	27	---	203	192	---	203	---	43	---	40	32	---
TOTAL	1014	3566	9353	8126	5164	5888	6752	2600	1314	1635	1902	2458
MEAN	32.7	119	302	262	184	190	225	83.9	43.8	52.7	61.4	81.9
MAX	67	764	1460	460	484	335	385	179	118	167	176	173
MIN	21	22	85	142	111	103	164	43	29	31	31	25
AC-FT	2010	7070	18550	16120	10240	11680	13390	5160	2610	3240	3770	4880

CAL YR 1977 TOTAL 25115 MEAN 68.8 MAX 1460 MIN 14 AC-FT 49820
WTR YR 1978 TOTAL 49772 MEAN 136 MAX 1460 MIN 21 AC-FT 98720

14359000 ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OR

LOCATION.--Lat 42°26'15", long 122°59'10", in SW¼ sec.18, T.36 S., R.2 W., Jackson County, Hydrologic Unit 17100308, on right bank at Raygold, 0.1 mi (0.2 km) downstream from Gold Ray Dam, 1.0 mi (1.6 km) downstream from Bear Creek, 5.6 mi (9.0 km) northwest of Central Point, and at mile 125.8 (202.4 km).

DRAINAGE AREA.--2,053 mi^2 (5,317 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1905 to current year. Prior to October 1921, published as "near Tolo."

REVISED RECORDS.--WSP 1248: 1906, 1914(M), 1915. WSP 1398: 1910(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,121.78 ft (341.919 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 19, 1914, nonrecording gage and Sept. 19, 1914, to Sept. 30, 1956, water-stage recorder, at site 300 ft (91 m) upstream at same datum.

REMARKS.--Water-discharge records excellent. Flow regulated since February 1977 by Lost Creek Lake (see station 14335040). Slight regulation by Fish Lake (published with station 14342500) and Emigrant Lake (published with station 14350000). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--73 years, 2,975 ft^3/s (84.25 m^3/s), 2,155,000 acre-ft/yr (2.66 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 131,000 ft^3/s (3,710 m^3/s) Dec. 23, 1964, gage height, 23.43 ft (7.141 m), from rating curve extended above 63,000 ft^3/s (1,780 m^3/s) on basis of slope-area measurement of 113,000 ft^3/s (3,200 m^3/s); minimum, 619 ft^3/s (17.5 m^3/s) Feb. 19, 1977, result of closure of Lost Creek dam; minimum daily, 616 ft^3/s (17.4 m^3/s) Sept. 6, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1861 reached a stage of about 32 ft (10 m), discharge not determined, and flood in February 1890 reached a stage of about 27.5 ft (8.38 m), discharge not determined, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 38,500 ft^3/s (1,090 m^3/s) Dec. 15, gage height, 12.37 ft (3.770 m); minimum, 1,300 ft^3/s (36.8 m^3/s) Oct. 12, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1580	1470	2660	4700	2220	1860	2840	3010	2020	2450	2260	1870
2	1510	1440	2540	4550	2840	1820	2870	2910	1950	2620	2040	1830
3	1450	1450	6050	4180	11700	1810	2870	2710	2000	2610	2010	1820
4	1420	1400	7160	3680	7700	1830	3070	2370	1990	2490	2020	1840
5	1400	1400	4070	4570	5920	1860	3750	2020	1960	2450	2090	2070
6	1420	1460	3020	4900	5300	2060	4160	2070	1970	2550	2070	2240
7	1400	1510	3820	4310	6620	1910	2960	2100	1970	2510	2070	1960
8	1390	1450	2650	3800	8840	3420	2640	1820	2040	2470	2040	1830
9	1370	1410	2250	3870	6640	4440	2490	1790	2140	2440	2070	1570
10	1370	1390	2110	4480	4720	3320	2420	1640	2320	2450	2090	1680
11	1370	1380	3150	4030	3670	3040	2260	1840	2480	2440	2090	1740
12	1350	1380	4330	3770	3100	3070	2160	1960	2540	2540	2120	1630
13	1340	1380	5490	3740	2780	2910	2100	2380	2510	2680	2150	1590
14	1340	1370	23700	3740	2540	2820	2070	2420	2480	2690	2160	1880
15	1360	1370	33000	3980	2610	2640	2420	2620	2400	2710	2150	1830
16	1380	1470	13700	6070	2470	2540	2560	2880	2290	2750	2250	1770
17	1370	1460	12300	5960	2490	2440	2510	2810	2280	2770	2160	1750
18	1420	1410	6870	5430	2640	2090	2450	2680	2400	2720	2090	1830
19	1400	1400	4800	5140	2560	2020	2410	2450	2510	2650	2070	1830
20	1390	1380	3890	4650	2450	1960	2440	2090	2450	2640	2020	1770
21	1380	1950	3480	4400	2370	2060	2280	2090	2360	2650	2300	1730
22	1380	5620	3190	4480	2320	2400	2370	2100	2320	2650	2200	1730
23	1390	5720	3320	3960	2220	2560	2370	2090	2330	2660	2060	1670
24	1400	10700	3420	3620	2150	2810	2290	2450	2340	2660	1970	1660
25	1560	7670	3160	3370	2090	3070	2360	2800	2370	2660	2200	1640
26	1620	11700	2850	3180	2020	2880	2740	2510	2340	2650	2070	1630
27	1500	7180	3860	2490	1970	2820	2910	2360	2340	2660	1990	1620
28	1450	5350	5200	2320	1910	2770	3150	2300	2320	2650	1950	1550
29	1450	3550	4980	2240	---	2740	3040	2220	2490	2650	1900	1560
30	1500	3100	6300	2160	---	2840	2960	2170	2450	2660	1880	1580
31	1540	---	5350	2100	---	2750	---	2070	---	2590	1880	---
TOTAL	44200	90920	192670	123870	106860	79560	79920	71730	68360	80770	64420	52720
MEAN	1426	3031	6215	3996	3816	2566	2664	2314	2279	2605	2078	1757
MAX	1620	11700	33000	6070	11700	4440	4160	3010	2540	2770	2300	2240
MIN	1340	1370	2110	2100	1910	1810	2070	1640	1950	2440	1880	1550
AC-FT	87670	180300	382200	245700	212000	157800	158500	142300	135600	160200	127800	104600

CAL YR 1977 TOTAL 666812 MEAN 1827 MAX 33000 MIN 662 AC-FT 1323000
WTR YR 1978 TOTAL 1056000 MEAN 2893 MAX 33000 MIN 1340 AC-FT 2095000

14359000 ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1973 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 22.0°C July 25, 26, 1976; minimum, 0.0°C Jan. 7, 1974.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 19.0°C July 6-8, 14; minimum, 3.0°C Nov. 21.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.5	12.5	---	---	8.5	8.0			---	---	7.5	5.5
2	14.5	12.5	---	---	8.0	7.0			---	---	7.0	6.0
3	14.0	12.5	9.5	---	7.5	6.5			---	---	9.0	6.5
4	14.5	13.0	9.5	8.0	8.0	6.5			---	---	9.5	8.0
5	14.5	13.5	10.0	8.5	6.5	5.5			---	---	9.0	8.0
6	14.5	12.0	10.5	9.5	5.5	4.5			6.5	---	9.5	7.5
7	14.0	12.0	10.5	9.5	6.0	5.0			7.5	6.5	9.0	8.0
8	14.0	12.5	9.5	7.5	7.0	6.0			7.0	5.5	8.5	8.0
9	---	---	8.5	7.0	7.0	6.5			6.5	5.5	10.0	8.0
10	---	---	8.5	7.5	8.5	7.0			6.0	4.5	9.0	7.5
11	---	---	9.0	8.0	8.5	8.0			5.5	3.5	8.5	7.0
12	---	---	9.0	7.5	8.5	6.0			5.0	4.0	8.5	6.5
13	---	---	10.0	8.5	6.0	6.0			6.0	4.5	8.5	7.0
14	---	---	10.0	9.0	6.0	5.5			6.0	5.0	8.5	6.0
15	---	---	10.5	9.5	---	---			7.0	5.5	9.0	6.0
16	---	---	10.5	9.0	---	---			6.0	4.5	9.5	6.5
17	---	---	9.0	7.5	---	---			6.0	5.0	10.5	7.5
18	---	---	7.5	6.0	---	---			8.0	6.0	11.5	8.5
19	---	---	6.5	5.5	---	---			8.5	6.5	12.0	9.5
20	---	---	6.0	4.0	---	---			8.5	6.5	12.0	9.5
21	---	---	4.0	3.0	---	---			9.0	7.0	12.5	10.5
22	---	---	4.5	4.0	7.0	---			9.0	7.0	12.5	10.5
23	---	---	5.5	4.0	7.0	6.5			8.5	7.0	12.0	9.5
24	---	---	6.5	5.0	---	---			9.0	7.5	9.5	8.0
25	---	---	8.5	6.5	---	---			9.0	7.0	11.0	7.5
26	---	---	8.5	8.0	---	---			9.0	7.0	12.0	8.5
27	---	---	8.0	7.5	---	---			8.5	6.5	11.5	8.5
28	---	---	7.5	7.5	---	---			8.0	6.0	11.5	8.5
29	---	---	8.0	7.5	---	---			---	---	11.0	8.5
30	---	---	8.5	7.5	---	---			---	---	12.0	8.5
31	---	---	---	---	---	---			---	---	11.0	8.5
MONTH	14.5	12.0	10.5	3.0	8.5	4.5			9.0	3.5	12.5	5.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.5	8.0	12.5	9.0	17.5	13.0	18.0	15.5	16.5	12.0	18.0	15.5
2	9.5	7.0	13.5	9.5	17.0	12.5	16.0	14.5	17.0	13.0	18.0	15.5
3	9.0	7.0	13.5	10.5	17.0	13.0	16.5	14.0	17.5	13.5	18.0	15.5
4	10.0	7.5	12.5	9.5	17.5	13.5	18.5	13.5	17.5	14.0	17.5	14.0
5	9.0	7.5	13.0	9.0	18.0	14.0	18.5	14.0	17.5	13.5	14.5	13.5
6	9.5	7.0	13.5	10.0	18.0	14.0	19.0	14.5	17.5	14.0	15.5	13.5
7	10.5	7.5	14.5	10.5	17.5	13.5	19.0	15.0	18.0	14.5	16.5	14.0
8	11.0	7.5	15.5	11.5	17.0	13.5	19.0	15.0	18.0	14.5	15.5	13.5
9	12.5	8.5	15.5	13.0	16.5	13.0	18.5	14.5	17.5	14.0	15.0	13.0
10	13.5	10.0	14.5	12.0	14.5	11.5	18.0	14.5	17.0	13.5	14.0	12.0
11	13.5	11.0	13.5	11.0	16.5	11.0	18.0	13.5	16.5	13.5	15.5	12.5
12	13.0	10.0	13.0	10.5	16.0	12.5	18.5	13.5	16.5	13.5	15.0	13.0
13	12.0	9.5	14.0	10.0	15.0	12.0	18.5	14.0	16.0	13.5	15.0	13.0
14	11.0	9.5	13.0	10.0	14.5	11.5	19.0	14.5	17.5	13.0	15.0	12.0
15	10.0	8.5	12.0	9.5	15.5	11.0	18.5	14.5	17.5	14.0	15.0	12.5
16	9.5	7.5	13.5	9.0	16.5	11.5	17.0	13.0	15.5	13.5	14.5	12.5
17	10.0	8.0	14.5	9.5	17.0	12.5	18.0	13.5	17.0	13.0	14.0	11.5
18	11.5	8.5	15.0	10.0	17.0	12.5	18.0	13.5	17.5	13.5	13.0	11.5
19	11.5	9.5	15.5	11.5	17.5	12.5	18.0	13.5	17.5	14.0	13.5	10.5
20	11.0	8.0	15.5	12.0	17.5	14.0	18.0	13.5	17.5	14.0	15.0	12.0
21	11.0	8.5	15.5	12.5	17.5	13.5	18.0	13.5	15.5	13.5	15.0	13.0
22	10.5	9.0	14.5	11.0	17.5	13.0	17.5	12.0	17.0	13.5	14.5	12.5
23	11.0	8.5	13.5	10.0	17.0	13.0	16.5	12.0	16.5	14.0	14.5	12.5
24	11.0	9.5	11.5	9.5	15.0	12.0	17.0	12.5	16.0	14.0	14.5	12.5
25	12.5	10.0	13.5	9.5	15.5	12.0	16.5	12.5	17.5	14.0	14.5	12.5
26	12.0	10.0	13.0	10.5	17.5	12.0	16.5	12.5	17.5	14.5	14.5	12.5
27	13.0	9.0	15.5	11.0	18.0	13.0	16.5	12.0	17.5	15.0	14.5	13.0
28	12.0	10.0	16.5	12.0	18.0	14.5	16.5	12.0	18.0	15.0	14.0	12.0
29	13.0	8.0	15.5	12.0	16.5	13.5	16.5	12.0	18.5	15.5	14.0	12.0
30	12.5	10.0	15.5	11.5	18.5	14.0	17.0	12.5	18.5	16.0	14.0	12.5
31	---	---	16.0	12.0	---	---	17.0	12.5	18.0	15.5	---	---
MONTH	13.5	7.0	16.5	9.0	18.5	11.0	19.0	12.0	18.5	12.0	18.0	10.5

14361500 ROGUE RIVER AT GRANTS PASS, OR

LOCATION.--Lat 42°25'50", long 123°19'00", in NW¼ sec.20, T.36 S., R.5 W., Josephine County, Hydrologic Unit 17100308, on right bank at city of Grants Pass filter plant, 0.6 mi (1.0 km) upstream from bridge on State Highway 99 at Grants Pass, and at mile 101.8 (163.8 km).

DRAINAGE AREA.--2,459 mi^2 (6,369 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Prior to January 1939 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 885.28 ft (269.833 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 8, 1957, at datum 3.00 ft (0.914 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since February 1977 by Lost Creek Lake (station 14355040), slight regulation by Fish Lake and Emigrant Lake. Large fluctuations at times caused by Savage Rapids Dam 5.5 mi (8.8 km) above station. Many diversions from Rogue River and tributaries above station, the largest of which is at Savage Rapids Dam of Grants Pass Irrigation District, 5.5 mi (8.8 km) above station.

AVERAGE DISCHARGE.--40 years, 3,508 ft^3/s (99.35 m^3/s), 2,542,000 acre-ft/yr (3.13 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 152,000 ft^3/s (4,300 m^3/s) Dec. 23, 1964, gage height, 34.15 ft (10.409 m), from rating curve extended above 93,000 ft^3/s (2,630 m^3/s); minimum, 195 ft^3/s (5.52 m^3/s) Jan. 30, 1961; minimum daily, 606 ft^3/s (17.2 m^3/s) Sept. 10, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1861 reached a stage of about 42 ft (13 m), present datum (information furnished by Corps of Engineers). Flood in February 1890 reached a stage of about 35 ft (11 m), present datum, and that of Feb. 21, 1927, about 31 ft (9 m), present datum, according to local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 44,600 ft^3/s (1,260 m^3/s) Dec. 15, gage height, 16.08 ft (4.901 m); minimum, 1,100 ft^3/s (31.2 m^3/s) Oct. 30, caused by regulation at Savage Rapids Dam; minimum daily, 1,380 ft^3/s (39.1 m^3/s) Nov. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1780	1530	2880	5470	2620	2190	3070	3110	1940	2310	2130	1750
2	2160	1480	2670	5100	4000	2140	3130	3020	1840	2520	1870	1730
3	1560	1490	5270	5000	20600	2120	3110	3240	1890	2520	1820	1700
4	1540	1460	8080	4160	12400	2150	3280	2660	1850	2380	1810	1750
5	1500	1440	4610	5600	8140	2180	3950	2260	1830	2300	1850	1940
6	1510	1480	3250	6300	7080	2380	5030	1900	1800	2380	1880	2240
7	1510	1560	3590	5560	8490	2250	3530	1870	1780	2350	1890	1970
8	1480	1490	3260	4720	14200	3420	3110	1870	1850	2300	1830	1870
9	1460	1450	2440	4580	10100	5230	2900	1610	1920	2270	1820	1600
10	1450	1420	2280	5190	6860	3950	2790	1650	2140	2260	1850	1710
11	1440	1400	2780	4770	5270	3520	2610	1620	2320	2210	1890	1780
12	1420	1390	5160	4430	4280	3520	2440	1810	2370	2310	1910	1650
13	1410	1400	5280	4240	3740	3330	2360	2260	2320	2460	1950	1590
14	1400	1390	25900	4330	3360	3280	2310	2350	2320	2480	1970	1880
15	1410	1380	40300	4560	3330	3040	2560	2490	2240	2480	1950	1910
16	1420	1450	19500	9800	3180	2910	2790	2840	2140	2530	2070	1830
17	1410	1490	17000	8780	3170	2800	2790	2750	2180	2550	2040	1800
18	1400	1440	9610	7190	3350	2470	2630	2650	2200	2510	1900	1870
19	1400	1410	6110	6660	3250	2330	2490	2480	2380	2420	1940	1900
20	1390	1390	4870	5770	3100	2250	2460	2050	2320	2420	1810	1830
21	1390	1730	4060	5320	2950	2250	2260	2000	2220	2430	2120	1770
22	1390	5100	3810	5360	2870	2710	2430	2020	2150	2440	2140	1690
23	1410	7350	3980	4720	2730	2900	2530	2010	2150	2460	1970	1620
24	1410	11200	4380	4210	2630	3280	2470	2350	2180	2440	1920	1600
25	1560	10500	3960	3890	2530	3510	2380	2800	2220	2430	2090	1580
26	1670	15000	3550	3750	2430	3250	2790	2560	2190	2430	2050	1580
27	1570	8490	4140	3020	2360	3150	2960	2370	2190	2460	1920	1560
28	1480	6340	6340	2780	2270	3090	3250	2280	2180	2440	1870	1530
29	1430	3920	5750	2630	---	3020	3150	2190	2330	2440	1800	1510
30	1460	3350	7270	2530	---	3130	3060	2130	2360	2440	1770	1530
31	1590	---	6360	2440	---	3030	---	1990	---	2430	1760	---
TOTAL	46410	101920	228440	152860	151290	90780	86620	71190	63800	74800	59590	52270
MEAN	1497	3397	7369	4931	5403	2928	2887	2296	2127	2413	1922	1742
MAX	2160	15000	40300	9800	20600	5230	5030	3240	2380	2550	2140	2240
MIN	1390	1380	2280	2440	2270	2120	2260	1610	1780	2210	1760	1510
AC-FT	92050	202200	453100	303200	300100	180100	171800	141200	126500	148400	118200	103700

CAL YR 1977 TOTAL 705543 MEAN 1933 MAX 40300 MIN 710 AC-FT 1399000
WTR YR 1978 TOTAL 1179970 MEAN 3233 MAX 40300 MIN 1380 AC-FT 2340000

14361500 ROGUE RIVER AT GRANTS PASS, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1973 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 23.5°C June 7, 1977; minimum, 0.5°C Jan. 7, 8, 11, 1974, Jan. 8, 9, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 20.5°C Aug. 8, but may have been higher during periods of no record in June, July, and August; minimum, 2.5°C Nov. 21.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.0	13.0	12.5	11.0	9.0	8.5	6.0	5.0	7.0	6.5	7.5	6.0
2	15.0	13.0	12.5	11.5	9.0	8.0	6.0	5.5	6.5	6.5	7.5	6.5
3	15.0	12.5	12.0	10.5	9.5	9.0	7.0	6.0	8.5	6.5	8.5	7.0
4	15.0	12.5	10.5	8.0	9.0	9.0	7.0	6.5	8.5	7.5	10.0	8.0
5	15.0	13.0	9.5	8.5	9.0	7.5	7.0	6.5	8.0	7.5	10.0	9.0
6	14.5	13.0	10.5	9.0	7.5	7.5	7.0	7.0	8.0	7.0	9.5	8.5
7	14.0	12.0	10.5	10.0	8.0	7.5	7.0	6.5	8.0	7.5	9.5	8.5
8	14.0	12.0	10.5	8.5	8.0	6.5	8.0	6.5	8.0	6.5	9.5	8.5
9	14.0	12.0	9.0	7.0	6.5	5.5	8.5	7.5	7.0	6.5	9.5	8.5
10	14.0	12.0	8.0	7.0	6.0	5.0	8.0	8.0	7.0	6.0	9.5	8.5
11	14.0	12.0	8.5	7.5	7.0	6.0	8.0	7.0	6.0	5.0	9.0	8.0
12	14.5	12.5	9.0	8.0	7.5	7.0	7.0	7.0	6.0	5.0	8.5	7.5
13	14.5	13.0	9.5	8.5	8.5	7.5	8.0	7.0	6.5	5.5	8.5	7.5
14	14.5	13.0	10.5	9.5	9.0	8.5	8.0	7.5	7.0	6.0	8.5	7.0
15	14.5	13.0	10.5	10.0	9.0	7.0	8.0	7.5	7.0	6.0	8.5	7.0
16	14.5	13.0	10.5	9.5	7.0	6.5	8.5	7.0	6.5	6.0	9.5	7.5
17	14.5	12.5	10.0	8.5	6.5	6.0	8.5	8.0	6.5	6.0	10.5	8.0
18	14.0	12.5	8.5	7.0	6.5	6.0	8.0	7.5	8.0	6.5	11.5	9.0
19	14.0	12.5	7.0	5.5	6.5	5.5	7.5	7.5	9.0	7.5	12.0	9.5
20	13.5	12.5	6.0	4.5	5.5	5.0	8.0	7.5	9.0	8.0	12.5	10.0
21	12.5	11.0	5.0	2.5	6.5	5.0	8.0	7.5	9.5	8.0	13.0	10.5
22	12.0	10.5	4.5	3.5	7.5	6.5	7.5	6.5	9.5	8.5	12.5	11.5
23	12.0	11.0	4.5	4.0	8.0	7.5	7.0	5.5	9.5	8.5	12.0	10.0
24	12.5	11.5	6.0	4.5	8.0	7.5	5.5	5.0	9.5	8.5	10.0	9.0
25	13.0	12.5	8.0	6.5	7.0	6.0	6.0	5.0	9.0	8.5	10.0	8.5
26	12.5	12.0	8.5	8.0	6.0	5.5	7.0	6.0	9.0	7.5	11.5	9.5
27	12.0	11.0	8.5	8.5	7.0	5.5	7.0	6.5	9.0	8.0	11.5	10.5
28	11.5	10.5	8.5	8.0	7.5	7.0	6.5	5.5	8.5	7.0	12.0	10.0
29	11.5	10.5	8.5	8.0	7.5	7.0	7.5	6.0	---	---	11.0	9.5
30	11.0	10.5	9.5	8.5	7.5	7.0	7.5	6.5	---	---	11.0	9.5
31	11.5	10.5	---	---	7.0	6.0	7.0	6.0	---	---	11.0	9.5
MONTH	15.0	10.5	12.5	2.5	9.5	5.0	8.5	5.0	9.5	5.0	13.0	6.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.5	8.5	12.0	11.0	---	---	---	---	17.5	15.5	18.5	18.0
2	9.0	8.5	13.0	11.0	---	---	---	---	18.0	15.5	18.5	18.0
3	9.0	8.0	14.0	12.0	---	---	---	---	19.5	17.0	19.0	18.0
4	9.5	8.0	13.5	11.0	---	---	---	---	19.0	17.5	19.0	16.5
5	9.0	8.0	13.0	10.5	---	---	---	---	19.0	17.5	17.0	14.5
6	8.5	8.0	14.5	10.5	---	---	---	---	19.0	17.5	15.0	14.0
7	9.5	8.0	14.5	11.5	---	---	---	---	20.0	17.5	16.0	14.5
8	11.0	8.5	15.0	13.0	---	---	---	---	20.5	18.0	16.0	15.5
9	12.0	9.5	15.5	14.5	---	---	---	---	20.0	18.0	16.0	15.0
10	13.5	10.5	16.0	14.5	---	---	---	---	19.0	17.5	15.0	14.0
11	14.0	11.5	14.5	13.5	---	---	---	---	18.5	17.0	15.0	14.0
12	13.0	11.5	13.5	13.0	---	---	---	---	18.0	16.0	15.0	14.5
13	12.5	10.5	13.5	12.5	---	---	---	---	16.5	15.5	15.5	14.5
14	11.5	10.0	13.5	12.5	15.5	---	---	---	17.0	15.5	15.0	14.0
15	10.0	9.5	12.5	11.0	15.0	13.5	---	---	17.5	16.0	15.0	14.0
16	9.0	8.5	13.0	11.0	16.0	13.5	---	---	17.5	15.5	15.0	14.0
17	10.0	8.5	14.0	11.5	17.0	14.5	---	---	16.5	15.0	15.0	13.5
18	10.5	9.0	15.0	12.0	17.0	15.5	---	---	18.0	15.5	13.5	12.5
19	11.0	10.0	16.0	13.0	16.0	14.0	---	---	18.0	16.5	---	---
20	10.0	9.5	16.5	14.0	18.5	15.5	---	---	18.0	16.5	---	---
21	10.5	9.0	16.5	15.0	19.0	16.5	18.5	---	17.5	15.5	---	---
22	10.5	9.5	16.0	14.5	18.5	16.5	18.5	16.5	16.0	14.5	---	---
23	10.5	9.5	14.5	12.5	18.0	16.0	17.0	15.0	17.0	15.5	---	---
24	11.5	10.0	13.0	11.0	17.0	15.0	17.5	15.5	---	15.5	---	---
25	12.0	10.5	12.0	10.5	15.0	14.0	18.0	15.5	---	---	---	---
26	12.0	11.5	13.5	11.5	16.0	14.0	18.0	15.5	---	---	---	---
27	12.0	10.5	14.0	12.0	18.0	15.5	17.5	15.5	---	---	---	---
28	13.5	11.5	16.5	14.0	18.5	16.5	17.5	15.0	---	---	---	---
29	12.5	11.0	16.5	14.5	18.5	16.5	17.5	15.0	---	---	---	---
30	13.0	11.5	---	14.0	17.5	15.5	17.5	15.5	19.0	---	---	---
31	---	---	---	---	---	---	17.5	15.5	19.5	18.5	---	---
MONTH	14.0	8.0	16.5	10.5	19.0	13.5	18.5	15.0	20.5	14.5	19.0	12.5

14361600 ELLIOTT CREEK NEAR COPPER, OR

LOCATION.--Lat 42°00'16", long 123°09'00", in W½ sec.17, T.48 N., R.11 W., Siskiyou County, California, Hydrologic Unit 17100309, Rogue River National Forest, on left bank 0.3 mi (0.5 km) upstream from Middle Fork Applegate River.

DRAINAGE AREA.--51.8 mi² (134 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1978.

GAGE.--Water-stage recorder. Datum of gage is 2,023.56 ft (616.781 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for period of no gage-height record, which are fair. No regulation or diversion.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22.7 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 26	0100	1,050	29.7	4.53	1.381	Dec. 14	0600	*1,690	47.9	*5.48	1.670

Minimum discharge, 6.0 ft³/s (0.17 m³/s) Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	19	89	124	118	130	251	145	144	69	25	19
2	13	27	79	124	166	130	207	154	142	79	23	19
3	11	23	90	121	380	130	186	170	145	82	24	18
4	10	28	105	123	269	140	177	162	153	68	22	19
5	10	36	85	213	236	140	173	147	160	61	23	37
6	10	24	83	175	220	140	166	145	162	58	23	38
7	11	22	77	151	326	170	156	154	151	55	22	32
8	9.4	21	67	168	309	220	153	170	147	53	22	26
9	9.0	18	62	216	271	200	158	181	138	51	21	51
10	8.7	17	58	166	232	180	179	175	131	50	19	68
11	9.0	19	194	162	202	170	184	168	121	48	20	40
12	8.7	19	138	151	186	160	173	156	116	46	21	30
13	8.7	18	501	158	168	150	168	179	110	45	22	30
14	8.7	17	1280	173	151	140	158	192	105	43	20	46
15	8.3	21	459	258	142	130	154	186	99	41	20	32
16	8.3	22	436	551	135	130	145	162	93	41	21	28
17	8.3	18	343	406	128	130	137	158	90	40	21	27
18	8.0	16	266	326	137	140	131	164	89	38	20	30
19	7.7	14	213	287	142	150	133	179	86	37	20	30
20	8.3	13	188	234	150	160	124	190	85	35	19	27
21	8.3	130	170	209	160	170	119	196	85	34	25	25
22	8.3	192	160	188	160	200	115	184	79	33	34	24
23	8.3	90	202	170	170	220	111	164	77	32	23	23
24	9.4	284	179	158	170	200	115	154	74	30	22	23
25	45	403	156	147	170	190	138	147	73	30	36	21
26	25	461	144	142	150	190	151	140	70	30	25	21
27	16	181	188	131	140	205	147	140	67	28	22	20
28	14	126	168	126	130	202	153	147	80	27	21	20
29	21	128	160	121	---	209	151	149	83	27	20	20
30	42	108	151	116	---	227	151	144	74	27	20	19
31	23	---	131	113	---	234	---	140	---	27	20	---
TOTAL	413.4	2515	7022	5928	5318	5287	4666	5042	3229	1365	696	863
MEAN	13.3	83.8	227	191	190	171	156	163	108	44.0	22.5	28.8
MAX	45	461	1280	551	380	234	251	196	162	82	36	68
MIN	7.7	13	58	113	118	130	111	140	67	27	19	18
CFSM	.26	1.62	4.38	3.69	3.67	3.30	3.01	3.15	2.09	.85	.43	.56
IN.	.30	1.81	5.04	4.26	3.82	3.80	3.35	3.62	2.32	.98	.50	.62
AC-FT	820	4990	13930	11760	10550	10490	9260	10000	6400	2710	1380	1710

WTR YR 1978 TOTAL 42344.4 MEAN 116 MAX 1280 MIN 7.7 CFSM 2.24 IN 30.41 AC-FT 83990

NOTE.--No gage-height record Feb. 20 to Mar. 26.

14361600 ELLIOT CREEK NEAR COPPER, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: October 1977 to current year.
SUSPENDED SEDIMENT DISCHARGE: November 1977 to current year.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum, 23.0°C Aug. 7, 8; minimum, 0.0°C Nov. 20, 21.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,330 mg/l Dec. 14; minimum daily mean, 0 mg/l July 30, Sept. 17, 22-24, 28-30.
SEDIMENT LOADS: Maximum daily, 12,300 tons (11,200 tonnes) Dec. 14; minimum daily, 0 tons (0 tonnes) July 30, Sept. 17, 22-24, 28-30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	9.0	7.5	6.0	4.0	4.0	2.5	5.0	4.0	5.0	2.5
2	---	---	9.0	7.5	6.0	4.5	5.5	3.5	6.0	4.5	7.0	4.5
3	---	---	7.0	6.0	7.0	6.0	6.0	5.0	7.0	5.5	7.0	5.0
4	---	---	6.0	4.5	7.0	6.0	6.0	4.5	7.0	5.5	6.5	5.0
5	11.5	---	7.5	5.5	5.5	4.0	6.0	5.0	7.0	5.5	7.0	5.5
6	11.0	9.0	7.5	6.0	6.5	4.0	6.0	5.0	6.5	5.0	7.0	4.5
7	10.5	7.5	7.0	6.0	6.0	5.0	6.5	4.5	6.0	5.0	7.0	5.5
8	10.5	7.5	5.5	4.0	5.0	2.5	6.5	6.0	6.0	5.0	6.0	5.5
9	10.0	7.0	4.5	3.0	4.5	2.5	7.0	6.5	5.5	4.5	6.5	5.5
10	10.0	7.0	6.5	3.5	5.0	3.5	6.5	5.5	4.5	4.0	7.0	5.0
11	10.5	7.5	7.0	5.5	6.0	5.0	6.0	4.5	4.0	3.0	6.0	5.0
12	11.0	8.5	6.0	4.5	6.0	5.0	6.5	5.5	5.0	3.5	5.5	3.5
13	12.0	9.0	6.5	5.5	7.5	6.0	7.0	6.0	5.5	3.5	6.0	4.5
14	12.0	9.0	7.5	5.5	7.5	7.0	7.0	6.0	5.5	3.5	6.0	3.5
15	11.5	9.0	8.0	6.5	7.5	4.5	6.0	5.0	5.0	3.5	6.5	3.5
16	12.0	10.5	6.5	4.5	4.5	4.5	6.5	5.5	5.5	3.5	7.5	4.0
17	11.0	8.5	4.5	3.5	5.0	4.0	6.5	5.5	5.0	3.5	8.5	5.0
18	10.5	8.0	3.5	2.5	4.5	3.5	6.5	5.5	6.5	5.0	8.5	5.5
19	10.5	8.5	2.0	1.0	3.0	2.5	7.0	5.5	6.0	4.5	9.0	5.5
20	9.5	7.5	1.5	.0	4.0	2.5	6.5	5.0	6.5	4.5	9.0	5.5
21	9.0	7.0	3.0	.0	5.0	4.5	6.5	5.0	6.5	5.0	8.5	6.5
22	8.5	6.0	3.5	3.0	5.5	4.5	5.5	4.5	6.5	4.5	8.0	6.5
23	11.0	8.5	4.5	3.5	6.0	5.0	4.5	3.5	7.0	5.0	7.0	5.5
24	12.0	10.0	5.5	4.5	5.5	4.0	4.0	3.0	7.0	5.5	7.5	5.0
25	12.0	9.5	7.5	5.0	4.5	3.5	6.0	4.0	7.0	5.0	8.5	5.0
26	10.0	8.5	6.0	5.0	5.5	4.0	5.5	4.5	6.0	4.5	9.5	6.0
27	10.0	8.5	6.5	5.5	6.5	5.5	5.0	3.5	5.5	4.0	9.5	6.0
28	10.0	8.0	6.0	4.5	6.5	5.5	5.5	4.0	5.0	3.0	9.5	6.0
29	9.5	8.0	7.5	6.0	6.5	5.5	5.0	4.0	---	---	8.5	6.0
30	9.0	7.5	6.5	5.0	5.5	3.5	5.0	3.5	---	---	9.0	6.5
31	8.5	7.0	---	---	3.5	2.5	5.5	4.0	---	---	8.5	6.5
MONTH	12.0	6.0	9.0	.0	7.5	2.5	7.0	2.5	7.0	3.0	9.5	2.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	5.0	10.0	6.0	13.0	7.5	15.0	12.0	20.5	14.0	17.5	13.5
2	7.0	4.0	11.0	5.5	14.0	8.0	14.5	11.5	21.0	14.0	18.0	13.5
3	7.0	4.5	10.5	7.0	15.5	9.0	15.5	11.0	22.0	15.5	17.5	14.0
4	6.5	4.0	9.5	5.5	16.0	9.5	17.5	10.5	22.0	16.5	16.0	13.0
5	6.0	4.5	9.0	4.5	16.5	10.0	18.0	10.5	22.0	16.0	13.0	12.0
6	5.0	3.5	10.5	4.5	16.5	10.5	19.0	11.0	22.5	16.5	13.5	11.0
7	6.0	3.5	11.5	5.5	16.0	9.5	19.5	12.5	23.0	17.0	14.0	11.0
8	8.0	4.5	12.5	6.0	17.0	10.0	20.5	13.0	23.0	17.0	14.0	11.0
9	9.5	4.0	11.0	7.5	13.0	10.0	19.5	12.5	22.0	16.5	13.5	11.0
10	10.5	5.5	10.5	7.0	11.5	9.5	18.5	13.5	21.0	16.0	12.5	10.5
11	9.0	5.5	9.5	7.0	15.0	7.5	18.5	11.5	20.0	14.5	13.0	10.0
12	9.0	4.5	10.5	6.0	14.0	10.0	18.5	12.0	18.0	15.0	13.0	9.0
13	8.5	4.5	12.0	7.5	14.5	9.5	20.5	13.0	17.5	12.5	12.5	10.5
14	7.0	4.5	10.0	7.5	14.0	9.5	21.0	14.0	18.0	12.0	13.0	10.5
15	6.0	4.5	8.5	6.0	13.0	8.5	18.5	14.5	16.5	13.0	13.5	10.0
16	6.0	3.5	11.0	5.5	15.5	7.5	19.5	13.5	16.5	14.0	12.5	9.5
17	8.0	4.0	12.0	5.5	17.0	9.0	20.0	13.5	17.5	13.0	11.5	9.5
18	8.0	5.0	13.0	6.5	14.0	11.0	20.0	12.5	17.5	11.5	11.0	8.5
19	7.0	5.0	13.0	7.5	18.0	10.5	20.5	13.0	17.0	12.5	10.5	7.0
20	7.0	4.0	12.5	8.0	18.5	11.5	20.5	13.5	17.0	13.0	11.5	7.0
21	7.5	4.0	13.0	8.0	18.5	12.0	21.5	13.5	15.0	13.0	12.5	9.5
22	8.0	4.5	10.5	6.5	18.0	11.0	21.5	14.5	15.5	12.0	12.0	9.0
23	8.5	5.0	8.0	6.0	15.0	10.5	22.0	15.5	16.0	11.5	13.0	9.0
24	10.0	6.0	7.5	5.0	13.5	10.5	22.0	15.0	16.0	13.0	13.5	10.0
25	9.0	7.0	9.0	5.0	14.5	9.5	22.5	16.0	16.0	13.0	14.0	11.0
26	7.5	6.5	9.5	6.5	17.5	10.5	22.5	17.5	16.5	12.5	14.0	11.0
27	10.5	6.5	12.5	7.0	18.5	11.0	21.0	14.5	17.0	12.5	13.5	11.5
28	9.5	7.0	14.0	8.5	16.5	12.5	21.5	14.5	17.5	12.5	13.0	10.5
29	10.5	6.5	13.5	8.0	16.0	12.0	21.5	15.0	18.0	13.5	12.5	9.5
30	8.0	6.5	13.0	6.5	18.0	12.0	21.5	15.5	17.5	15.0	13.0	10.0
31	---	---	14.0	7.0	---	---	21.0	14.5	19.0	15.5	---	---
MONTH	10.5	3.5	14.0	4.5	18.5	7.5	22.5	10.5	23.0	11.5	18.0	7.0

14361600 ELLIOT CREEK NEAR COPPER, OR—Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1			---	---	11	2.6	10	3.3	6	1.9	4	1.4
2			---	---	11	2.3	12	4.0	60	38	4	1.4
3			---	---	12	2.9	10	3.3	244	266	6	2.1
4			---	---	15	4.3	34	11	45	33	6	2.3
5			---	---	8	1.8	49	28	37	24	8	3.0
6			---	---	8	1.8	21	9.9	18	11	5	1.9
7			---	---	5	1.0	12	4.9	152	158	7	3.2
8			4	.23	8	1.4	24	11	41	34	5	3.0
9			6	.29	9	1.5	63	37	31	23	5	2.7
10			7	.32	7	1.1	24	12	13	8.1	5	2.4
11			7	.36	255	182	15	6.6	12	6.5	5	2.3
12			7	.36	52	19	17	6.9	15	7.5	5	2.2
13			7	.34	768	1490	16	6.8	7	3.2	5	2.0
14			7	.32	3330	12300	32	15	7	2.9	5	1.9
15			7	.40	1550	3590	145	119	5	1.9	5	1.8
16			8	.48	520	612	395	643	4	1.5	9	3.2
17			7	.34	240	222	138	151	5	1.7	5	1.8
18			7	.30	106	76	70	62	6	2.2	7	2.6
19			6	.23	68	39	38	29	10	3.8	5	2.0
20			6	.21	54	27	24	15	5	2.0	7	3.0
21			473	518	31	14	20	11	5	2.2	11	5.0
22			498	381	24	10	15	7.6	6	2.6	39	21
23			29	7.0	78	43	10	4.6	6	2.8	42	25
24			201	196	31	15	7	3.0	5	2.3	20	11
25			554	932	16	6.7	7	2.8	8	3.7	12	6.2
26			1320	2380	11	4.3	8	3.1	5	2.0	14	7.2
27			120	59	42	21	5	1.8	4	1.5	17	9.4
28			34	12	18	8.2	7	2.4	5	1.8	25	14
29			26	9.0	16	6.9	7	2.3	---	---	30	17
30			16	4.7	14	5.7	4	1.3	---	---	39	24
31			---	---	9	3.2	3	.92	---	---	52	35
TOTAL			---	4502.88	---	18715.7	---	1219.52	---	649.1	---	221.0

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	115	78	6	2.3	12	4.7	7	1.3	3	.20	5	.26
2	32	18	11	4.6	11	4.2	10	2.1	2	.12	2	.10
3	18	9.0	14	6.4	11	4.3	12	2.7	3	.19	4	.19
4	16	7.6	7	3.1	14	5.8	5	.92	4	.24	4	.21
5	15	7.0	3	1.2	15	6.5	5	.82	3	.19	3	.30
6	11	4.9	3	1.2	19	8.3	5	.78	4	.25	5	.51
7	11	4.7	5	2.1	15	6.1	4	.59	3	.18	2	.17
8	9	3.7	16	7.3	19	7.5	5	.72	3	.18	7	.49
9	12	5.1	15	7.3	10	3.7	5	.69	2	.11	22	4.6
10	25	12	23	11	7	2.5	4	.54	3	.15	23	4.2
11	23	11	32	15	7	2.3	4	.52	3	.16	3	.32
12	14	6.5	21	8.8	6	1.9	4	.50	2	.11	1	.08
13	12	5.4	32	15	6	1.8	15	1.8	2	.12	2	.16
14	9	3.8	22	11	6	1.7	9	1.0	2	.11	5	.62
15	7	2.9	15	7.5	7	1.9	4	.44	1	.05	7	.60
16	7	2.7	16	7.0	5	1.3	4	.44	5	.28	1	.08
17	7	2.6	16	6.8	5	1.2	4	.43	2	.11	0	.00
18	6	2.1	14	6.2	4	.96	4	.41	2	.11	1	.08
19	9	3.2	19	9.2	7	1.6	3	.30	4	.22	1	.08
20	6	2.0	23	12	9	2.1	3	.28	2	.10	1	.07
21	6	1.9	32	17	7	1.6	4	.37	5	.34	2	.14
22	5	1.6	27	13	6	1.3	2	.18	9	.83	0	.00
23	5	1.5	15	6.6	5	1.0	3	.26	4	.25	0	.00
24	6	1.9	10	4.2	4	.80	2	.16	4	.24	0	.00
25	9	3.4	11	4.4	4	.79	3	.24	9	1.0	2	.11
26	8	3.3	16	6.0	4	.76	2	.16	4	.27	1	.06
27	12	4.8	35	13	5	.90	5	.38	4	.24	1	.05
28	10	4.1	13	5.2	20	4.3	2	.15	3	.17	0	.00
29	11	4.5	13	5.2	20	4.5	2	.15	3	.16	0	.00
30	8	3.3	11	4.3	7	1.4	0	.00	2	.11	0	.00
31	---	---	10	3.8	---	---	1	.07	3	.16	---	---
TOTAL	---	222.5	---	227.7	---	87.71	---	19.40	---	6.95	---	13.48

14361600 ELLIOT CREEK NEAR COPPER, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
21...	1920	232	451	283	67
22...	0120	329	2201	1960	67
22...	0720	172	353	164	69
22...	1320	179	114	55	73
22...	1920	166	85	38	71
23...	1500	75	22	4.5	63
24...	1500	377	227	231	60
24...	2100	399	404	435	63
25...	0300	340	385	353	60
25...	0900	303	203	166	66
25...	1020	300	136	110	58
25...	1130	300	122	99	66
25...	1155	300	121	98	63
25...	1800	371	188	188	56
25...	2400	9390	3460	87700	--
26...	0600	575	1957	3040	49
26...	1200	374	748	755	44
26...	1800	271	365	267	50
26...	2400	225	278	169	35
27...	0600	200	134	72	48
27...	1200	179	104	50	50

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
27...	1800	162	88	38	46
27...	2400	149	66	27	52
DEC					
11...	0800	144	179	70	49
11...	1400	317	680	582	46
11...	2000	229	163	101	51
12...	0200	170	87	40	43
13...	0800	263	266	189	39
13...	1400	824	1626	3620	52
13...	1535	859	1787	4150	47
13...	1555	804	1860	4040	--
13...	1607	849	1510	3460	50
13...	1900	775	1171	2450	44
14...	0100	718	939	1820	42
14...	0700	1480	6832	27300	59
14...	0910	1300	4366	15300	45
14...	1025	1270	6935	23800	74
14...	1115	1240	2950	9880	--
14...	1145	1240	3042	10200	45

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC					
14...	1230	1300	2551	8950	50
14...	1315	1360	2879	10600	50
14...	1700	1450	3087	12100	51
14...	2300	1340	2590	9370	49
15...	0500	1070	2099	6060	42
15...	0908	880	1452	3450	49
15...	0955	839	1610	3650	--
15...	1024	839	1183	2680	56
15...	1300	765	1171	2420	48
15...	1900	608	870	1430	48
16...	0100	504	639	870	52
16...	0700	454	529	648	48
16...	1300	416	413	464	51
16...	1900	386	443	462	40
17...	0100	377	313	319	50
17...	0700	352	287	273	49
17...	1300	337	240	218	47
17...	1900	314	172	146	56
18...	0100	287	138	107	60
18...	0700	271	118	86	57
18...	1300	251	96	65	53

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC					
18...	1900	246	87	58	62
19...	0100	225	79	48	53
JAN					
15...	1430	249	151	102	52
15...	2030	364	236	232	47
16...	0300	383	260	269	48
16...	0900	780	957	2020	42
16...	1500	583	325	512	45
16...	2100	501	234	317	48
17...	0330	468	182	230	52
17...	0930	413	140	156	52
17...	2100	349	93	88	42
18...	1420	314	150	127	30
FEB					
02...	1800	234	123	78	61
02...	2100	271	139	102	55
02...	2400	292	111	88	52
03...	0300	306	123	102	59
03...	0600	383	350	362	48
03...	0900	482	346	450	52

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
FEB					
03...	1018	482	290	377	60
03...	1200	450	218	265	56
03...	1500	393	144	153	53
03...	1800	355	112	107	52
03...	2100	346	82	77	57
03...	2400	329	73	65	57
07...	0200	295	244	194	72
07...	0700	225	299	182	46
07...	0800	251	132	89	65
07...	0950	320	220	190	43
07...	1100	377	400	407	64

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
FEB					
07...	1201	423	348	397	36
07...	1400	413	176	196	57
07...	1500	406	192	210	56
07...	1506	406	220	241	40
07...	1800	416	58	65	54
07...	2100	380	64	66	55
APR					
01...	0800	46	19	2.4	78
01...	1400	236	73	47	74
01...	2000	229	53	33	76

14361600 ELLIOT CREEK NEAR COPPER, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
NOV							
25...	2400	9390	3460	87700	5	13	--
DEC							
13...	1555	804	1860	4040	3	7	14
14...	1115	1240	2950	9880	5	9	15
15...	0955	839	1610	3650	4	7	13

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM
NOV						
25...	36	48	70	84	94	100
DEC						
13...	23	34	52	64	78	94
14...	26	38	60	74	90	99
15...	22	33	49	64	81	95

14361700 CARBERRY CREEK NEAR COPPER, OR

LOCATION.--Lat 42°01'34", long 123°10'10", in SW¼SW¼ sec.3, T.41 S., R.4 W., Jackson County, Hydrologic Unit 17100309, on right bank, 1.2 mi (1.9 km) west of Copper and at mile 0.9 (1.4 km).

DRAINAGE AREA.--68.9 mi² (178 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January to September 1978.

GAGE.--Water-stage recorder. Datum of gage is 1,990.01 ft (606.555 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. No regulation. Diversion for irrigation of up to 8 ft³/s (0.2 m³/s) from Sturgis Fork into Thompson Creek above station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peak of Dec. 14, 1977, reached a stage of 5.90 ft (1.798 m) from floodmarks, discharge, 2,600 ft³/s (73.6 m³/s). A discharge of 4.2 ft³/s (0.12 m³/s) was measured Sept. 16, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period January to September, 1,160 ft³/s (32.9 m³/s) Feb. 3, gage height, 4.09 ft (1.247 m), no peak above base of 2,000 ft³/s (56.6 m³/s); minimum, 13 ft³/s (0.37 m³/s) Aug. 4, 5, 16-18, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				32	141	196	277	143	106	44	17	15
2				32	225	191	237	141	104	48	17	15
3				32	900	188	205	148	102	48	16	15
4				35	673	207	196	148	102	42	15	16
5				55	572	205	183	143	102	38	13	25
6				45	550	202	180	132	102	36	13	30
7				40	630	210	172	128	95	31	14	25
8				45	640	343	165	134	83	31	14	30
9				60	594	343	162	157	76	30	15	60
10				429	533	303	170	153	76	29	14	90
11				363	456	274	199	148	74	29	14	60
12				346	406	247	188	136	67	29	14	47
13				336	370	225	177	134	64	29	14	38
14				367	340	213	170	165	61	28	15	40
15				448	303	196	167	199	59	27	15	32
16				894	263	185	157	160	58	26	15	29
17				751	240	177	153	148	54	26	13	28
18				581	240	177	148	141	53	25	13	29
19				504	250	180	150	143	53	23	14	28
20				421	253	199	155	160	58	24	13	26
21				370	263	231	145	162	53	23	16	24
22				336	267	270	139	157	50	23	18	23
23				292	277	323	134	143	48	21	15	23
24				250	288	299	132	134	48	20	16	23
25				219	288	267	134	125	48	20	37	23
26				196	260	250	141	117	47	20	21	20
27				172	237	260	141	115	45	19	19	20
28				162	213	270	141	115	74	20	18	18
29				155	---	270	143	117	50	20	17	16
30				139	---	299	145	113	45	19	16	15
31				132	---	284	---	111	---	18	16	---
TOTAL	---	---	---	8239	10672	7484	5006	4370	2057	866	497	883
MEAN	---	---	---	266	381	241	167	141	68.6	27.9	16.0	29.4
MAX	---	---	---	894	900	343	277	199	106	48	37	90
MIN	---	---	---	32	141	177	132	111	45	18	13	15
CFSM	---	---	---	3.86	5.53	3.50	2.42	2.05	1.00	.41	.23	.43
IN.	---	---	---	4.45	5.76	4.04	2.70	2.36	1.11	.47	.27	.48
AC-FT	---	---	---	16340	21170	14840	9930	8670	4080	1720	986	1750

14361700 CARBERRY CREEK NEAR COPPER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: October 1977 to current year.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum, 23.5°C July 26, Aug. 7, 8; minimum, 0.0°C Nov. 20, 21.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	10.5	8.0	6.0	4.0	4.0	2.5	5.5	4.0	6.0	3.0
2	---	---	9.5	7.0	6.0	5.0	5.0	3.5	5.5	4.0	7.0	5.0
3	---	---	7.5	5.0	7.0	6.0	5.5	4.5	6.5	5.0	7.5	6.0
4	---	---	6.0	4.5	7.0	5.5	5.5	4.0	7.0	5.5	7.0	6.0
5	---	---	8.0	5.5	5.0	3.5	5.0	4.0	6.5	5.5	7.5	6.0
6	12.0	---	8.0	6.0	6.5	4.0	5.5	4.0	6.5	5.5	7.5	5.0
7	12.0	8.0	7.5	5.5	6.0	4.5	5.5	4.0	5.5	5.0	7.5	5.5
8	11.5	8.0	5.5	4.0	4.5	2.5	6.0	5.0	6.0	4.5	6.5	6.0
9	11.0	7.5	5.0	3.0	4.0	2.5	6.0	5.0	5.5	5.0	7.0	5.5
10	11.5	7.5	6.5	4.0	5.0	3.0	5.5	4.5	5.0	4.0	7.0	5.5
11	11.5	8.0	6.5	5.0	6.0	5.0	5.5	4.0	4.5	3.5	7.0	5.5
12	12.0	9.0	6.5	4.5	5.5	4.5	6.0	4.5	5.5	4.0	6.5	4.0
13	12.5	9.5	7.5	6.0	6.5	5.5	6.5	6.0	6.0	4.0	6.5	5.0
14	12.5	9.5	7.5	5.5	7.0	6.5	6.5	6.0	6.0	4.0	7.0	4.0
15	12.5	9.5	9.0	6.5	7.0	4.5	5.5	4.0	5.5	4.0	7.5	3.5
16	13.0	10.5	6.5	5.0	4.5	4.5	6.0	4.5	6.0	4.0	8.5	4.0
17	12.0	9.0	5.5	3.5	5.0	4.0	6.5	5.5	6.0	4.0	9.0	5.0
18	11.5	9.0	3.5	2.5	4.5	3.5	6.5	5.5	7.0	5.5	9.5	5.5
19	12.0	9.5	2.5	1.5	3.5	2.5	6.5	5.5	7.0	4.5	10.0	6.0
20	10.5	8.5	2.0	.0	4.0	2.5	6.0	5.0	7.0	4.5	10.0	6.0
21	10.0	7.5	1.0	.0	5.0	4.0	6.5	5.0	7.5	5.0	9.5	7.0
22	9.5	7.0	3.0	1.0	5.0	4.5	5.5	4.0	7.5	5.0	8.0	7.0
23	11.0	9.0	4.5	2.5	5.5	4.5	4.5	3.5	7.5	5.0	7.5	5.5
24	12.0	10.5	5.0	4.0	5.0	4.0	4.0	3.0	7.5	5.5	8.0	5.0
25	12.0	10.0	7.0	5.0	4.0	3.5	5.5	4.0	7.0	5.5	9.0	5.0
26	10.5	8.5	6.0	5.0	5.0	3.5	6.0	4.5	6.0	4.5	10.0	6.0
27	10.0	8.0	6.5	5.5	6.0	5.0	5.5	3.5	6.5	4.5	10.5	6.5
28	9.5	8.5	6.0	5.0	5.5	5.0	6.0	4.0	6.0	3.5	9.5	6.0
29	9.5	8.5	7.0	5.5	6.0	5.0	6.0	4.5	---	---	9.0	6.0
30	9.0	8.0	6.0	5.0	5.0	3.5	5.5	3.5	---	---	9.5	7.0
31	9.5	7.5	---	---	3.5	2.5	6.0	4.0	---	---	8.5	7.0
MONTH	13.0	7.0	10.5	.0	7.0	2.5	6.5	2.5	7.5	3.5	10.5	3.0

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.0	5.0	11.0	6.5	15.0	9.0	16.0	13.5	21.0	15.5	18.5	14.5
2	7.5	4.5	12.0	6.0	15.5	9.0	16.5	13.5	21.5	15.5	19.0	14.5
3	7.0	4.5	11.5	7.5	16.5	10.0	16.0	12.5	22.5	17.0	19.0	15.5
4	7.5	4.5	10.5	6.0	18.0	11.0	19.0	12.5	23.0	18.0	16.5	13.5
5	6.5	4.5	10.5	5.0	18.5	11.5	19.5	12.5	23.0	18.0	13.5	13.0
6	5.5	3.5	11.5	5.0	18.5	12.0	20.0	13.0	23.0	18.0	14.5	12.5
7	7.0	3.5	12.5	6.0	18.0	11.5	21.0	14.5	23.5	18.0	14.5	12.0
8	9.0	4.5	13.5	7.0	19.0	12.0	21.5	15.0	23.5	18.5	14.5	12.5
9	10.5	4.0	12.0	8.0	16.0	12.0	20.5	14.0	23.0	18.0	14.0	11.5
10	11.5	5.5	11.5	7.5	16.0	11.5	19.5	15.0	22.0	17.5	12.5	11.0
11	10.0	5.5	11.0	7.5	16.5	9.5	19.5	13.0	21.0	16.5	14.0	10.0
12	10.0	5.0	11.5	6.5	17.0	12.0	20.0	14.0	18.5	16.0	15.0	9.5
13	9.5	4.5	13.0	8.0	15.5	11.5	21.5	14.5	17.0	13.5	13.0	11.5
14	7.5	4.5	11.5	8.5	15.5	11.0	22.5	16.0	18.5	13.5	15.0	11.5
15	6.5	5.5	9.5	6.5	15.5	10.5	20.0	16.5	17.0	14.5	14.5	11.0
16	6.5	4.0	11.5	6.0	17.0	9.5	19.0	15.0	17.0	15.0	14.5	10.5
17	8.5	4.5	13.0	6.0	18.0	11.0	20.5	15.0	18.5	14.0	12.5	10.0
18	8.0	5.5	14.0	7.5	16.0	13.0	20.5	14.5	18.0	13.0	12.0	9.5
19	7.5	6.0	14.0	8.5	19.0	12.0	21.0	15.0	18.5	14.0	12.5	8.0
20	7.5	4.5	13.0	9.0	19.5	13.5	21.5	15.0	17.5	14.5	13.5	8.5
21	8.0	4.0	13.5	9.0	19.5	14.0	22.0	15.5	16.0	14.0	14.0	11.0
22	8.0	5.0	12.5	8.0	19.0	13.0	22.5	16.5	15.5	13.5	14.5	10.5
23	9.0	5.5	9.0	7.0	17.0	12.5	23.0	17.0	17.0	13.0	15.5	10.5
24	10.5	6.0	8.5	6.5	15.5	12.0	22.5	17.0	16.0	14.0	15.5	11.5
25	10.0	7.0	10.0	5.5	15.5	11.0	22.5	17.5	18.0	13.5	15.0	12.5
26	8.0	7.0	10.0	7.0	19.0	12.5	23.5	19.0	17.0	13.5	15.5	12.0
27	10.5	6.0	13.5	7.0	20.0	13.0	22.0	16.0	18.0	13.5	15.5	12.5
28	10.5	7.5	15.5	9.0	18.0	15.0	22.0	16.5	18.5	14.0	15.0	11.5
29	11.5	7.0	15.0	9.5	18.0	14.5	22.5	16.5	19.0	14.5	14.5	11.0
30	9.0	7.0	14.0	8.0	19.5	14.5	22.0	16.5	19.0	16.5	14.5	11.5
31	---	---	15.0	8.0	---	---	22.0	16.0	19.5	16.5	---	---
MONTH	11.5	3.5	15.5	5.0	20.0	9.0	23.5	12.5	23.5	13.0	19.0	8.0

14361700 CARBERRY CREEK NEAR COPPER, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1976

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JAN					
18...	1540	554	26	39	--
FEB					
03...	1130	1150	430	1340	--
03...	1440	1070	278	803	--
FEB					
07...	1110	692	151	282	--
07...	1324	702	86	163	--
07...	1430	712	95	183	--

14362000 APPLEGATE RIVER NEAR COPPER, OR

LOCATION (REVISED).--Lat 42°03'50", long 123°06'37", in SW¼NW¼ sec.30, T.40 S., R.3 W., Jackson County, Hydrologic Unit 17100309, U.S. Corps of Engineer land, on left bank 0.1 mi (0.2 km) downstream from Brushy Gulch, 3.1 mi (5.0 km) northeast of Copper, and at mile 45.7 (73.5 km).

DRAINAGE AREA.--225 mi² (583 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Prior to January 1939 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,747.51 ft (532.641 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1977, at site 0.6 mi (1.0 km) upstream at datum 12.15 ft (3.703 m) higher.

REMARKS.--Water-discharge records good. Some storage during winter in Squaw Lakes Reservoir, capacity, 1,100 acre-ft (1.36 hm³) on Squaw Creek above station. Diversion for irrigation above station in Applegate River basin; also diversion above station for irrigation into Thompson Creek basin.

AVERAGE DISCHARGE.--40 years, 448 ft³/s (12.69 m³/s), 324,600 acre-ft/yr (400 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,800 ft³/s (844 m³/s) Jan. 15, 1974, gage height, 25.38 ft (7.736 m), site and datum then in use, from high-water mark in well, from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of four slope-area measurements of peak flows made in 1950, 1955, 1964, and 1974; minimum, 19 ft³/s (0.54 m³/s) Sept. 12-15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 26	0030	6,510	184	10.00	3.048	Jan. 16	0900	3,200	90.6	6.90	2.103
Dec. 14	0830	*7,050	200	*10.46	3.188	Feb. 3	1030	3,550	101	7.26	2.213

Minimum, 34 ft³/s (0.96 m³/s) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	124	555	665	541	560	900	532	396	157	55	49
2	79	154	488	640	854	551	754	546	391	176	51	47
3	68	138	645	660	2690	575	675	605	391	179	54	47
4	63	142	685	685	1810	615	650	575	408	154	49	50
5	63	215	550	1270	1570	600	645	522	416	141	50	77
6	63	154	493	1190	1450	585	620	499	408	132	53	96
7	63	136	450	999	1700	620	590	508	370	127	49	84
8	59	120	340	1110	1650	1110	560	551	350	122	47	88
9	57	111	347	1620	1430	958	570	610	334	117	46	203
10	55	99	314	1370	1220	825	650	590	326	113	38	311
11	52	103	882	1140	1050	748	711	570	300	111	42	168
12	50	111	871	1070	934	685	660	513	278	106	46	117
13	49	113	2420	1030	831	650	630	565	264	104	50	113
14	49	109	6080	1190	748	610	600	660	250	100	45	129
15	48	133	4530	1510	691	565	580	685	247	96	50	106
16	48	157	2360	2540	645	546	541	560	234	96	50	90
17	47	126	1770	2110	610	551	508	527	221	92	50	86
18	44	111	1310	1650	620	575	495	518	218	88	50	86
19	43	105	1040	1500	625	615	522	560	209	88	49	82
20	42	95	911	1260	650	665	499	595	209	82	47	77
21	40	324	865	1140	680	754	468	615	203	79	54	73
22	40	1080	770	1020	706	882	450	575	188	75	72	70
23	39	611	1100	900	727	1060	450	495	182	73	55	68
24	40	2070	1140	808	743	917	455	472	176	70	53	67
25	215	2670	877	748	727	808	513	438	173	68	98	63
26	145	3420	743	696	670	808	541	412	165	70	65	60
27	92	1390	958	640	630	842	527	396	157	65	59	59
28	76	917	929	608	590	842	555	425	173	63	53	59
29	105	786	917	565	---	848	560	438	185	62	50	57
30	272	685	888	536	---	923	565	412	165	62	50	55
31	167	---	748	513	---	894	---	396	---	59	50	---
TOTAL	2372	16513	37426	33395	27792	22787	17444	16365	7987	3127	1630	2737
MEAN	76.5	550	1207	1077	993	735	581	528	266	101	52.6	91.2
MAX	272	3420	6080	2540	2690	1110	900	685	416	179	98	311
MIN	39	95	314	513	541	546	450	396	157	59	38	47
AC-FT	4700	32750	74230	66240	55130	45200	34600	32460	15840	6200	3230	5430

CAL YR 1977 TOTAL 81017 MEAN 222 MAX 6080 MIN 19 AC-FT 160700
WTR YR 1978 TOTAL 189575 MEAN 519 MAX 6080 MIN 38 AC-FT 376000

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: January 1977 to current year.
TURBIDITY: February 1973 to current year.

INSTRUMENTATION.--Hach Surface Scatter 4 turbidimeter since February 1973. Enviro-Lab temperature unit since January 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 26.5°C Aug. 7, 1978; minimum, 0.0°C many days in January and February, 1977, Nov. 20, 21, 1977.
TURBIDITY: Maximum recorded, 1,000 JTU Jan. 15, 1974 (meter inundated), Mar. 30, 1974; minimum, 0 JTU on many days each year.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 26.5°C Aug. 7; minimum, 0.0°C Nov. 20, 21.
TURBIDITY: Maximum, 460 JTU Nov. 25; minimum, 0 JTU on many days.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTORER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.0	9.0	11.0	8.0	6.5	5.0	---	---	6.0	4.5	6.0	3.0
2	14.0	9.0	10.0	7.5	7.0	5.5	---	---	6.5	5.0	7.0	5.0
3	14.0	9.0	8.0	6.0	8.0	7.0	---	---	7.0	6.0	8.0	6.0
4	14.5	9.5	6.5	5.0	7.5	6.5	---	---	7.5	6.0	7.5	6.0
5	15.0	10.0	8.5	6.0	6.0	4.5	---	---	7.5	6.0	7.5	6.0
6	14.0	10.5	9.0	6.5	7.0	4.5	---	---	7.0	6.0	7.5	5.5
7	13.5	9.0	8.0	6.0	7.0	5.5	---	---	6.5	6.0	7.5	6.0
8	13.5	8.5	6.5	4.5	5.0	3.5	---	---	6.5	5.5	6.5	6.0
9	13.5	8.5	6.5	3.0	4.5	3.0	---	---	6.5	5.5	7.5	6.0
10	13.5	8.5	7.5	4.0	5.5	3.5	---	---	5.5	5.0	7.5	6.0
11	14.0	8.5	7.0	5.5	6.5	5.5	---	---	5.5	4.0	7.0	5.5
12	14.5	9.5	7.0	5.0	6.5	5.5	---	---	6.0	4.5	7.0	4.5
13	15.0	10.0	8.0	6.0	7.5	6.5	7.5	---	6.5	4.5	6.5	5.0
14	14.5	10.0	8.5	6.0	8.0	7.5	7.5	7.0	6.5	4.5	7.5	4.5
15	15.0	10.0	9.0	7.0	7.5	5.5	7.5	5.5	6.0	4.5	8.0	4.0
16	14.5	11.0	7.5	5.0	5.5	5.0	7.0	6.0	6.5	4.5	9.0	4.5
17	14.5	10.0	6.0	4.0	5.5	5.0	7.5	6.5	6.0	4.5	9.5	5.5
18	14.5	9.5	4.5	2.5	5.0	4.5	7.5	6.5	8.0	6.0	10.0	6.0
19	13.5	10.0	3.5	1.5	4.5	3.0	7.5	6.5	7.5	5.5	10.0	6.0
20	13.0	9.0	2.0	.0	4.5	3.0	7.0	6.0	8.0	5.0	10.0	6.0
21	12.5	8.0	4.0	.0	---	---	7.5	6.0	8.0	5.5	9.0	7.0
22	11.0	7.5	4.5	3.5	---	---	6.5	5.0	8.0	5.0	8.5	7.0
23	12.0	9.5	5.0	4.5	---	---	5.5	4.5	8.0	5.5	7.5	5.5
24	13.5	10.5	6.0	5.0	---	---	5.0	3.5	7.5	6.0	8.0	5.0
25	12.5	10.0	7.5	5.5	---	---	6.5	4.5	7.5	6.0	9.5	5.5
26	12.0	9.0	6.5	6.0	---	---	7.0	5.5	6.5	5.0	10.5	6.5
27	11.0	8.5	7.5	6.0	---	---	6.0	4.5	7.0	5.0	10.5	7.0
28	11.0	8.5	6.5	5.5	---	---	6.5	4.5	6.5	3.5	10.0	6.5
29	10.0	8.5	8.0	6.5	---	---	6.5	5.0	---	---	8.5	6.0
30	9.5	8.0	7.0	5.5	---	---	6.0	4.5	---	---	10.0	7.0
31	10.0	7.5	---	---	---	---	7.0	5.0	---	---	8.5	7.5
MONTH	15.0	7.5	11.0	.0	8.0	3.0	7.5	3.5	8.0	3.5	10.5	3.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.5	5.5	11.0	7.0	15.0	9.0	17.0	10.0	23.5	16.5	21.5	15.5
2	8.0	4.5	12.5	6.5	16.5	9.5	17.5	13.0	24.0	16.5	22.0	15.5
3	7.5	5.0	12.0	8.0	17.0	10.5	17.0	12.5	25.0	18.0	22.0	16.0
4	7.5	5.0	11.0	6.5	17.5	11.0	19.0	12.5	25.5	19.0	13.0	10.0
5	7.0	5.0	10.5	5.5	18.5	11.5	20.0	13.0	25.5	18.5	14.5	9.0
6	6.0	4.0	11.5	5.5	18.5	12.0	20.5	13.5	26.0	18.5	16.0	8.5
7	7.0	4.0	12.5	6.5	18.0	11.5	21.5	14.5	26.5	19.0	17.0	12.5
8	9.5	5.0	14.0	7.5	19.0	12.0	22.0	15.5	26.0	19.0	16.0	13.0
9	11.0	4.5	12.0	8.5	15.0	12.0	21.5	14.5	25.5	19.0	15.0	12.5
10	12.0	6.0	12.0	8.0	14.0	11.0	21.0	15.5	24.5	18.5	14.0	11.5
11	10.0	6.5	11.0	8.0	17.0	9.5	20.5	13.5	23.5	17.0	15.0	11.0
12	10.0	5.0	11.5	7.0	17.0	11.5	21.5	14.0	21.0	17.5	16.5	10.0
13	9.0	5.0	13.0	8.5	16.5	11.0	22.5	15.0	20.0	14.0	14.5	12.5
14	7.5	5.0	11.0	8.5	16.5	11.0	23.5	16.5	21.0	14.0	17.0	12.5
15	6.5	5.5	9.5	7.0	15.5	10.5	21.0	17.0	19.0	15.0	17.0	11.5
16	7.5	4.5	11.5	6.5	17.0	9.5	22.0	16.0	20.0	15.5	16.0	11.0
17	8.5	4.5	13.0	6.5	19.0	11.0	22.5	15.5	20.5	14.5	14.0	11.0
18	9.0	5.5	14.0	7.5	15.5	13.0	22.5	15.0	21.0	13.5	13.5	10.0
19	7.5	6.0	14.5	8.5	19.5	12.5	23.0	15.5	21.5	14.5	14.5	8.5
20	8.0	5.0	14.0	9.5	20.0	14.0	23.0	16.0	20.5	14.5	15.0	9.0
21	9.0	4.5	13.5	9.5	20.5	14.5	24.0	16.5	18.0	15.0	16.0	11.0
22	9.0	5.5	12.0	8.0	19.5	---	24.0	17.5	18.0	13.5	16.0	11.0
23	9.5	6.0	9.0	7.5	18.0	12.5	25.0	18.0	18.5	13.5	17.0	11.0
24	10.0	6.5	8.5	6.5	16.0	12.5	25.0	17.5	16.5	14.0	17.5	12.0
25	10.5	7.5	10.5	6.0	17.0	10.0	24.0	18.5	19.5	14.5	14.5	12.5
26	8.5	7.5	10.5	7.5	19.0	12.5	25.5	20.0	20.5	14.5	18.0	12.5
27	11.5	7.0	13.5	7.5	20.0	13.0	24.0	17.0	21.0	14.5	17.0	13.0
28	11.0	8.0	15.5	9.5	19.5	15.0	24.0	17.0	21.5	14.5	17.0	12.0
29	11.5	7.0	15.0	9.5	18.5	14.0	25.0	17.5	22.0	15.5	17.0	11.5
30	9.0	7.5	14.0	8.0	20.0	14.0	24.5	17.5	21.0	17.0	16.5	11.5
31	---	---	15.5	8.0	---	---	24.0	17.0	22.0	17.0	---	---
MONTH	12.0	4.0	15.5	5.5	20.5	9.0	25.5	10.0	26.5	13.5	22.0	8.5

14362000 APPLEGATE RIVER NEAR COPPER, OR—Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	0	0	0	0	0	0	1	0	0	---	---	---
2	0	0	0	0	0	0	0	0	0	---	---	---
3	4	0	0	0	0	0	4	0	1	---	---	---
4	0	0	0	7	0	1	1	0	0	---	---	---
5	1	0	0	10	0	3	0	0	0	---	---	---
6	0	0	0	0	0	0	0	0	0	---	---	---
7	1	0	0	0	0	0	0	0	0	---	---	---
8	0	0	0	0	0	0	0	0	0	---	---	---
9	0	0	0	0	0	0	0	0	0	---	---	---
10	1	0	0	45	0	2	0	0	0	---	---	---
11	0	0	0	0	0	0	50	0	20	---	---	---
12	0	0	0	0	0	0	15	0	4	---	---	---
13	0	0	0	0	0	0	270	2	100	---	0	---
14	0	0	0	0	0	0	230	---	---	6	0	1
15	1	0	0	0	0	0	220	15	55	30	1	15
16	1	0	0	0	0	0	15	5	9	150	15	55
17	1	0	0	0	0	0	6	1	3	40	10	20
18	0	0	0	0	0	0	2	1	2	15	7	10
19	0	0	0	0	0	0	15	1	3	10	4	7
20	0	0	0	0	0	0	3	0	1	5	1	3
21	0	0	0	180	0	45	---	---	---	3	0	1
22	0	0	0	20	2	9	---	---	---	2	0	0
23	0	0	0	25	2	7	---	---	---	0	0	0
24	1	0	0	70	10	35	---	---	---	0	0	0
25	15	0	6	460	25	95	---	---	---	1	0	0
26	8	0	1	390	40	140	---	---	---	0	0	0
27	0	0	0	50	9	25	---	---	---	0	0	0
28	0	0	0	10	3	6	---	---	---	0	0	0
29	2	0	0	7	1	3	---	---	---	1	0	0
30	3	0	0	2	0	1	---	---	---	0	0	0
31	0	0	0	---	---	---	---	---	---	0	0	0
MONTH	15	0	0	460	0	10	270	0	10	150	0	6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	95	0	10	---	---	---	20	2	8	0	0	0
2	---	0	15	---	---	---	2	0	0	1	0	0
3	---	---	---	---	---	---	0	0	0	2	0	1
4	---	---	---	---	---	---	0	0	0	0	0	0
5	---	---	---	---	---	---	0	0	0	0	0	0
6	---	---	---	---	---	---	0	0	0	1	0	0
7	---	---	---	---	---	---	0	0	0	2	0	0
8	---	---	---	---	---	---	1	0	0	3	0	0
9	---	---	---	---	---	---	0	0	0	55	1	5
10	---	---	---	---	---	---	1	0	0	60	1	8
11	---	---	---	---	---	---	0	0	0	20	3	5
12	---	---	---	---	---	---	0	0	0	6	0	2
13	---	---	---	---	---	---	0	0	0	5	0	1
14	---	---	---	---	---	---	0	0	0	9	0	2
15	---	---	---	---	---	---	0	0	0	5	0	2
16	---	---	---	---	---	---	0	0	0	2	0	0
17	---	---	---	---	---	---	0	0	0	1	0	0
18	---	---	---	---	---	---	0	0	0	4	0	0
19	---	---	---	---	---	---	0	0	0	1	0	0
20	---	---	---	---	---	---	0	0	0	20	0	1
21	---	---	---	---	0	---	0	0	0	3	0	1
22	---	---	---	1	0	0	0	0	0	3	0	1
23	---	---	---	1	0	0	1	0	0	0	0	0
24	---	---	---	0	0	0	0	0	0	0	0	0
25	---	---	---	1	0	0	0	0	0	7	0	1
26	---	---	---	1	0	0	0	0	0	0	0	0
27	---	---	---	1	0	0	0	0	0	0	0	0
28	---	---	---	1	0	0	0	0	0	1	0	0
29	---	---	---	2	0	0	0	0	0	2	0	1
30	---	---	---	3	0	0	0	0	0	2	0	0
31	---	---	---	2	0	0	---	---	---	1	0	0
MONTH	95	0	10	3	0	0	20	0	0	60	0	1

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	0	0	0	15	0	1	1	0	0	0	0	0
2	10	0	2	8	0	1	1	0	0	1	0	0
3	1	0	0	0	0	0	5	0	1	1	0	0
4	1	0	0	1	0	0	1	0	0	0	0	0
5	1	0	0	1	0	0	1	0	0	50	0	10
6	10	0	1	1	0	0	1	0	0	15	0	2
7	5	0	0	1	0	0	1	0	0	120	0	10
8	0	0	0	1	0	0	0	0	0	9	0	2
9	1	0	0	1	0	0	0	0	0	40	0	15
10	1	0	0	1	0	0	4	0	1	20	0	7
11	0	0	0	1	0	0	2	0	0	15	0	1
12	0	0	0	2	0	0	3	0	0	5	0	0
13	1	0	0	5	0	1	0	0	0	3	0	0
14	3	0	1	15	0	1	1	0	0	0	0	0
15	3	1	2	15	0	1	15	0	1	0	0	0
16	3	1	2	1	0	0	6	0	1	7	0	0
17	3	1	2	1	0	0	0	0	0	0	0	0
18	1	1	1	1	0	0	1	0	0	0	0	0
19	5	0	1	1	0	0	0	0	0	0	0	0
20	1	0	0	1	0	0	3	0	0	1	0	0
21	1	0	0	1	0	0	230	0	20	1	0	0
22	0	0	0	1	0	0	15	0	1	0	0	0
23	1	0	0	1	0	0	0	0	0	0	0	0
24	0	0	0	1	0	0	180	0	30	15	0	7
25	0	0	0	1	0	0	25	0	4	---	---	---
26	0	0	0	1	0	0	8	0	1	---	---	---
27	0	0	0	1	0	0	1	0	0	---	---	---
28	20	0	1	1	0	0	3	0	0	4	0	0
29	25	0	3	1	0	0	25	0	1	120	0	5
30	1	0	0	1	0	0	1	0	0	70	1	15
31	---	---	---	1	0	0	0	0	0	---	---	---
MONTH	25	0	1	15	0	0	230	0	2	120	0	3

14366000 APPLEGATE RIVER NEAR APPLEGATE, OR

LOCATION.--Lat 42°14'30", long 123°08'20", in NE¼ sec.26, T.38 S., R.4 W., Jackson County, Hydrologic Unit 17100309, on left bank 0.9 mi (1.4 km) downstream from Keeler Creek, 1.8 mi (2.9 km) southeast of Applegate, and at mile 26.7 (43.0 km).

DRAINAGE AREA.--483 mi^2 (1,251 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1738: Drainage area. WSP 1935: 1953(M), 1956(M). WDR OR-76-1: 1956(M), 1965(M).

GAGE.--Water-stage recorder. Datum of gage is 1,285.33 ft (391.769 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 23, 1938, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. No appreciable regulation. Many diversions for irrigation above station. McDonald Creek Canal diverts from McDonald Creek above station for irrigation in Bear Creek basin. Thompson Creek Irrigation Association ditch diverts above station for irrigation in Thompson Creek basin. Fowler-Keeler and Berryman ditches divert above station for irrigation below.

AVERAGE DISCHARGE.--40 years, 554 ft^3/s (15.69 m^3/s), 401,400 acre-ft/yr (495 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,200 ft^3/s (1,050 m^3/s) Jan. 15, 1974, gage height, 20.41 ft (6.221 m), from rating curve extended above 18,000 ft^3/s (510 m^3/s) on basis of average of slope-area measurements of flow at gage heights 18.00 ft (5.486 m) and 19.57 ft (5.965 m); minimum, 6.0 ft^3/s (0.17 m^3/s) Aug. 4, 1977, affected by manipulation of irrigation diversions above station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 20, 1927, reached a stage of 18.7 ft (5.70 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft^3/s (70.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 26	0400	7,430	210	8.24	2.512	Jan. 16	1300	4,750	135	6.61	2.015
Dec. 14	1100	*8,090	229	*8.59	2.618	Feb. 3	1330	3,870	110	5.98	1.823

Minimum, 6.2 ft^3/s (0.18 m^3/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144	162	676	836	671	723	1150	688	464	190	34	54
2	112	160	589	804	810	706	980	682	464	246	32	44
3	96	182	694	823	3020	723	883	741	459	249	37	42
4	85	152	802	804	2340	766	856	729	468	215	38	44
5	80	244	682	1370	1890	760	843	665	473	190	33	67
6	76	203	589	1330	1780	741	836	631	482	171	30	128
7	78	173	557	1150	2260	748	817	631	454	159	28	108
8	73	160	480	1160	2550	1340	772	653	428	144	29	102
9	70	144	438	1530	2180	1230	766	717	410	131	19	126
10	67	132	398	1460	1770	1060	830	700	393	126	14	393
11	62	130	869	1260	1500	980	924	688	372	120	9.5	265
12	61	142	1070	1200	1330	910	856	626	337	114	16	163
13	60	139	2680	1170	1160	862	817	642	326	108	18	144
14	57	144	6860	1250	1040	810	779	754	311	95	22	171
15	55	149	6190	1540	952	760	754	817	304	86	18	151
16	54	182	3130	3490	876	729	717	665	282	82	26	128
17	53	162	2380	3050	836	735	671	620	262	74	24	116
18	53	142	1780	2260	849	748	653	598	256	70	23	120
19	50	128	1380	1990	849	779	665	620	256	70	27	118
20	49	114	1150	1640	862	823	659	665	249	61	26	112
21	48	157	1020	1440	889	903	615	694	240	51	39	106
22	48	1360	924	1290	910	1080	588	676	218	41	100	100
23	48	775	1120	1150	931	1250	582	582	204	39	76	96
24	46	1990	1180	1030	944	1160	582	567	198	41	62	93
25	139	2650	1020	944	917	1010	631	531	192	38	98	87
26	229	4380	903	883	862	987	700	497	187	41	87	87
27	132	1720	1050	810	810	1030	682	468	171	40	70	86
28	106	1120	1070	760	760	1030	706	492	174	34	62	81
29	110	918	1040	717	---	1030	706	501	230	34	58	77
30	256	828	1030	682	---	1130	717	487	218	37	55	77
31	220	---	910	653	---	1090	---	459	---	38	55	---
TOTAL	2817	19042	44661	40476	36548	28633	22737	19486	9482	3135	1265.5	3486
MEAN	90.9	635	1441	1306	1305	924	758	629	316	101	40.8	116
MAX	256	4380	6860	3490	3020	1340	1150	817	482	249	100	393
MIN	46	114	398	653	671	706	582	459	171	34	9.5	42
AC-FT	5590	37770	88590	80280	72490	56790	45100	38650	18810	6220	2510	6910

CAL YR 1977 TOTAL 91980.7 MEAN 252 MAX 6860 MIN 6.5 AC-FT 182400
WTR YR 1978 TOTAL 231768.5 MEAN 635 MAX 6860 MIN 9.5 AC-FT 459700

14366000 APPLEGATE RIVER NEAR APPLEGATE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: August 1973 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: Maximum, 28.0°C July 29, 30, Aug. 3, 4, 1974; minimum, 0.0°C Jan. 31, Feb. 1, 1975, Jan. 2, Feb. 5-7, Dec. 19-22, 24, 1976, Jan. 6-9, 25-28, 1977, Nov. 21, 22, 1977.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum, 27.0°C Aug. 7, 8; minimum, 0.0°C Nov. 21, 22.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.5	11.0	13.0	10.0	6.5	6.0	4.5	3.0	5.5	4.5	7.0	4.0
2	15.5	11.5	12.5	9.0	7.5	5.5	5.5	4.0	6.0	5.0	7.5	5.5
3	16.0	11.0	10.0	7.5	8.0	7.5	6.5	5.5	7.0	6.0	9.0	6.5
4	16.0	11.5	8.0	6.5	8.0	7.5	6.5	5.5	7.0	6.0	9.0	7.0
5	16.0	12.5	8.0	6.5	7.5	5.5	6.0	5.5	7.5	6.5	8.5	7.0
6	14.5	12.0	10.5	8.0	8.0	5.0	6.5	5.5	7.0	6.0	8.5	6.5
7	15.0	11.0	10.0	7.5	7.5	6.5	6.5	5.0	7.0	6.0	8.5	6.5
8	14.5	10.5	8.0	5.5	6.5	5.0	7.5	6.5	6.5	5.5	8.0	7.0
9	14.5	10.5	7.5	4.5	5.0	3.5	7.0	7.0	6.5	5.5	8.5	6.5
10	14.5	10.5	7.5	5.0	5.5	4.0	7.0	6.0	5.5	5.0	8.5	7.0
11	15.0	10.5	8.0	6.0	7.0	5.5	6.0	5.5	5.5	4.0	8.0	7.0
12	15.5	11.5	8.5	5.0	6.5	5.5	6.5	6.0	6.0	4.5	8.0	5.5
13	15.5	12.0	9.0	7.0	7.5	6.5	7.5	6.5	6.0	4.5	7.5	6.0
14	15.5	12.0	9.5	7.5	8.0	7.5	7.5	6.5	6.0	4.5	8.5	5.0
15	15.5	12.0	10.5	7.5	8.0	5.5	7.0	5.5	7.0	5.0	8.5	4.5
16	15.0	13.0	9.0	7.0	6.0	5.5	7.0	5.0	6.0	4.5	9.5	5.5
17	15.0	11.5	7.5	5.5	6.0	5.0	7.5	6.5	6.0	4.5	10.5	6.5
18	14.5	11.5	5.5	4.0	5.5	5.0	7.0	6.0	8.5	6.0	11.0	7.5
19	14.5	12.0	4.5	2.5	5.5	3.5	7.0	6.0	8.5	6.5	11.5	7.5
20	13.5	11.0	3.0	1.0	4.5	3.5	7.0	6.0	8.0	5.5	11.5	7.5
21	12.5	9.5	2.0	.0	6.5	4.5	7.0	6.0	9.0	6.0	11.5	8.5
22	12.5	9.5	4.0	.0	6.5	5.5	6.5	5.0	8.5	6.0	10.0	8.5
23	12.5	11.0	5.0	3.5	7.0	6.0	5.5	4.0	8.0	6.0	9.0	7.0
24	15.0	11.0	6.5	5.0	6.5	5.5	5.0	3.0	8.5	7.0	9.0	6.0
25	14.5	12.0	8.0	6.0	5.0	4.0	6.0	4.0	8.5	6.5	10.5	6.5
26	13.0	10.5	7.5	6.5	5.5	4.5	7.0	5.5	7.5	5.5	11.5	8.0
27	12.0	10.0	7.5	7.0	7.0	5.5	5.5	4.0	8.5	6.0	12.0	8.5
28	12.0	9.5	7.0	6.5	7.0	6.5	6.0	4.5	7.5	4.0	11.0	8.0
29	11.5	9.5	8.0	7.0	7.0	6.5	6.5	5.0	---	---	9.5	9.0
30	11.0	9.5	8.0	7.0	6.5	5.0	6.0	4.0	---	---	11.5	8.5
31	12.0	9.0	---	---	4.5	3.5	6.0	4.5	---	---	10.0	8.5
MONTH	16.0	9.0	13.0	.0	8.0	3.5	7.5	3.0	9.0	4.0	12.0	4.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	7.5	12.5	8.5	17.0	12.0	19.0	16.5	24.0	19.0	22.5	18.0
2	8.5	6.0	13.5	8.5	18.0	11.5	19.5	15.0	24.5	19.0	22.5	18.0
3	8.5	6.0	13.5	10.0	18.5	13.0	18.5	15.0	25.5	20.0	21.5	18.5
4	9.0	6.5	12.0	8.0	19.5	13.5	21.5	14.5	25.5	21.0	19.5	16.0
5	7.5	6.0	12.0	7.0	20.0	14.5	22.0	15.5	25.0	20.0	16.5	15.5
6	7.5	6.0	13.0	7.5	20.0	15.0	22.5	16.0	26.0	20.0	17.0	15.0
7	8.5	5.0	14.0	8.5	19.0	14.0	23.5	17.0	27.0	21.5	18.5	15.0
8	10.5	5.5	15.0	9.5	20.0	14.5	24.0	18.0	27.0	21.5	17.5	15.0
9	11.5	6.5	13.5	11.0	17.0	14.5	23.0	17.0	26.5	21.0	16.5	15.5
10	13.0	8.0	13.0	10.0	15.5	13.0	23.0	17.0	25.5	20.5	15.5	13.5
11	12.0	8.5	13.0	10.0	18.0	11.5	23.0	16.0	24.5	19.5	17.0	13.5
12	11.0	7.0	12.5	8.5	18.5	14.0	24.0	17.0	21.5	19.0	18.0	12.5
13	10.5	7.0	14.0	10.0	18.0	13.0	25.5	18.5	21.5	17.0	16.0	14.0
14	9.0	6.5	13.0	10.5	18.5	13.0	26.0	19.5	22.5	17.5	18.5	14.0
15	8.0	7.0	12.0	9.0	18.0	12.5	23.0	19.5	20.5	18.0	18.5	14.0
16	8.0	6.0	13.5	8.5	18.5	11.5	22.5	18.0	20.0	17.5	17.5	13.5
17	10.0	6.0	14.0	9.0	20.0	13.0	23.0	18.0	21.5	17.0	15.0	13.0
18	11.0	7.0	15.5	10.0	17.0	15.0	23.5	17.5	22.0	17.0	14.5	12.5
19	9.0	7.5	16.0	11.0	20.5	13.5	24.0	18.0	22.0	17.5	16.0	10.5
20	9.5	6.0	15.5	11.5	22.0	16.5	25.0	18.5	20.0	17.5	16.5	11.5
21	9.5	6.0	15.0	11.5	22.0	17.0	25.5	19.5	18.5	17.0	17.0	13.5
22	10.5	7.0	13.5	10.0	21.0	16.0	25.5	20.5	20.0	16.0	17.5	13.0
23	10.5	7.5	11.5	9.0	20.5	15.5	26.0	21.0	20.0	16.0	18.5	13.5
24	10.5	8.5	10.0	8.0	18.0	14.5	26.0	20.5	18.5	17.0	19.0	14.5
25	12.5	9.5	12.5	8.0	17.5	13.5	26.0	21.0	20.5	16.5	18.5	15.5
26	10.5	9.0	12.0	9.5	21.0	14.0	26.0	21.5	21.5	16.0	18.5	14.5
27	13.5	8.5	15.5	9.5	22.5	15.5	24.5	19.0	22.0	17.0	18.5	15.0
28	13.0	10.0	17.5	12.0	21.5	17.5	24.5	19.5	22.5	17.0	18.0	14.0
29	13.0	9.0	16.5	12.0	20.0	17.0	25.5	19.5	23.0	18.0	18.0	13.5
30	11.5	9.5	16.0	11.0	22.0	16.0	25.0	20.5	22.5	19.5	17.5	14.0
31	---	---	16.5	10.5	---	---	25.0	19.5	23.0	19.0	---	---
MONTH	13.5	5.0	17.5	7.0	22.5	11.5	26.0	14.5	27.0	16.0	22.5	10.5

14370400 ROGUE RIVER NEAR MERLIN, OR

LOCATION.--Lat 42°29'50", long 123°29'15", in SE¼ sec.26, T.35 S., R.7 W., Josephine County, Hydrologic Unit 17100310, on left bank at Robertson Bridge, 3.4 mi (5.5 km) upstream from Jumpoff Joe Creek, 3.7 mi (6.0 km) southwest of Merlin, and at mile 86.8 (139.7 km).

DRAINAGE AREA.--3,271 mi² (8,472 km²).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: February 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 25.5°C Aug. 3-5, 1977; minimum, 0.0°C Jan. 9, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 23.0°C June 6; minimum, 0.5°C Nov. 21.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.5	13.5	12.5	11.5	9.0	8.5	5.5	5.0	6.5	6.5	8.0	6.5
2	15.5	13.0	13.0	11.5	9.0	8.0	6.0	5.0	7.0	6.0	7.5	7.5
3	15.5	13.5	11.5	10.5	9.5	9.0	7.0	6.0	8.0	7.0	9.0	7.5
4	15.5	13.5	10.5	8.5	9.0	8.5	7.0	7.0	8.0	7.5	10.0	8.5
5	16.0	13.5	10.0	8.5	8.5	8.0	7.5	6.5	8.0	7.5	10.5	9.5
6	14.5	13.5	10.5	9.0	8.5	7.5	7.5	7.0	8.0	7.0	10.0	9.0
7	15.0	13.5	11.0	9.5	8.5	7.5	7.0	6.5	8.0	7.5	9.5	9.0
8	14.0	13.0	10.0	9.0	7.5	6.0	8.0	6.5	7.5	6.5	9.5	9.0
9	15.0	12.5	8.5	7.5	6.0	5.5	8.5	8.0	7.0	6.5	9.5	8.5
10	15.0	12.5	8.0	7.0	5.5	5.5	8.5	8.0	6.5	6.0	10.0	8.5
11	15.0	12.5	8.5	7.0	6.5	5.5	8.0	7.0	6.0	5.0	9.5	8.5
12	15.0	13.0	9.0	7.5	7.5	6.5	7.0	6.5	6.0	5.0	9.5	8.0
13	15.5	13.5	9.5	8.5	9.0	7.5	7.5	7.0	7.0	5.5	9.5	8.0
14	15.5	13.5	10.5	8.5	9.0	8.5	8.0	7.5	7.0	6.0	9.5	7.0
15	15.5	14.0	11.5	10.0	9.0	7.0	8.0	7.5	7.5	6.0	9.5	7.0
16	15.5	13.5	10.5	9.0	7.0	6.0	8.0	7.0	7.0	6.0	10.5	7.5
17	15.0	13.5	10.0	8.0	6.0	6.0	8.5	8.0	6.5	6.0	11.0	8.5
18	15.0	13.5	8.0	6.5	6.5	6.0	8.0	7.5	8.0	6.5	12.0	9.5
19	15.0	13.0	6.5	5.5	6.0	5.5	8.0	7.5	9.5	7.5	12.5	10.5
20	14.0	12.5	5.0	4.0	5.0	4.5	8.0	7.5	9.0	8.0	13.0	11.0
21	13.5	11.5	3.5	.5	6.5	4.5	8.0	7.5	9.5	8.0	13.0	12.0
22	12.5	11.0	4.5	2.5	7.5	6.5	7.5	7.0	10.0	8.5	12.0	11.0
23	12.5	11.0	5.0	4.0	8.0	7.0	7.0	5.5	9.5	8.5	11.5	10.0
24	13.5	12.0	6.5	5.0	8.0	7.5	5.5	5.0	9.5	8.5	10.0	9.0
25	13.5	13.0	8.0	6.5	7.5	6.5	5.5	4.5	10.0	8.5	10.5	8.0
26	13.5	12.5	8.5	8.0	6.5	5.5	7.0	5.5	9.5	8.0	12.5	9.0
27	12.5	11.5	8.5	8.0	6.5	5.5	7.0	6.5	9.5	8.0	12.5	10.0
28	11.5	11.0	8.5	8.0	7.5	6.5	6.5	6.0	8.5	7.5	12.5	10.0
29	11.5	10.5	8.5	8.0	7.5	7.0	7.5	6.5	---	---	11.5	10.0
30	12.0	10.5	9.5	8.5	7.0	6.5	7.0	6.5	---	---	11.5	9.5
31	12.0	10.5	---	---	6.5	5.5	7.0	6.5	---	---	11.0	10.0
MONTH	16.0	10.5	13.0	.5	9.5	4.5	8.5	4.5	10.0	5.0	13.0	6.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.0	8.5	13.5	11.0	19.5	15.0	18.5	17.0	19.5	16.0	21.0	17.0
2	9.5	8.0	14.5	11.0	21.0	16.0	19.0	17.5	20.5	16.5	21.0	17.0
3	9.0	7.5	15.0	12.0	21.0	17.0	19.0	16.5	21.0	16.5	20.5	17.5
4	10.0	7.5	14.0	11.5	22.0	17.0	20.0	16.0	22.0	17.5	18.5	16.5
5	9.0	8.0	13.5	10.5	22.5	17.5	20.5	16.5	21.5	17.5	16.5	15.0
6	8.5	7.5	14.0	11.0	23.0	18.0	21.0	17.0	22.0	17.5	15.0	14.0
7	9.5	7.0	15.5	12.5	22.5	18.0	21.5	18.0	22.0	17.5	17.0	14.0
8	11.0	8.0	16.5	13.0	22.5	18.0	22.0	18.5	22.5	18.0	17.0	14.5
9	12.5	8.5	17.0	14.0	20.0	17.5	21.0	18.5	22.5	18.0	16.0	15.0
10	13.5	10.5	16.0	14.0	17.5	16.0	20.5	17.5	22.0	17.5	16.0	14.0
11	14.0	11.0	16.0	13.0	18.5	14.5	20.5	17.0	21.0	17.0	16.5	13.5
12	13.0	11.0	15.0	12.5	18.5	15.5	20.5	17.5	18.5	17.0	17.5	13.5
13	11.5	10.0	15.0	12.5	18.0	16.0	21.0	18.0	18.5	15.5	16.0	14.5
14	10.5	10.0	14.5	13.0	18.0	15.0	21.5	18.0	19.0	15.0	17.0	13.5
15	10.0	9.0	13.5	12.0	17.5	14.5	20.5	18.5	18.0	16.0	16.5	13.0
16	9.0	8.0	14.5	11.0	18.5	14.5	20.0	17.5	18.0	16.0	16.5	13.5
17	10.0	8.0	15.5	11.5	20.0	15.0	19.5	16.5	18.5	14.0	15.5	13.0
18	11.0	8.5	16.5	12.5	18.5	17.0	20.0	16.5	19.0	15.0	15.0	12.5
19	10.5	9.0	17.5	14.0	19.0	16.0	20.0	17.0	20.0	16.0	15.0	11.5
20	10.5	9.0	18.0	15.0	20.5	16.0	21.0	17.5	19.0	16.5	15.0	11.5
21	11.5	8.5	18.0	15.0	21.0	18.0	21.0	17.5	17.5	16.0	15.5	12.5
22	11.0	9.0	17.0	14.0	20.5	17.5	21.0	18.0	17.0	14.5	17.0	13.0
23	11.0	9.0	15.0	13.5	19.0	17.0	19.5	17.5	17.5	14.5	17.0	13.5
24	11.0	9.5	13.0	12.0	18.0	16.0	20.0	16.5	16.5	15.5	17.0	14.0
25	12.0	10.5	13.5	11.0	17.5	14.5	19.5	17.0	18.5	15.0	16.5	14.5
26	12.0	11.0	13.5	12.0	18.5	15.0	19.5	17.5	18.5	14.5	17.5	14.5
27	13.0	10.5	16.0	12.5	20.5	15.5	19.5	16.0	20.0	16.5	17.0	14.0
28	14.0	11.5	18.0	14.0	21.0	18.0	19.0	16.0	21.0	17.0	17.0	13.5
29	14.0	11.5	18.0	15.0	20.0	18.0	19.5	16.0	21.0	17.0	16.5	13.5
30	13.5	11.5	18.0	14.5	19.5	17.0	19.5	16.5	21.0	17.5	16.0	13.5
31	---	---	18.5	14.5	---	---	19.5	16.5	21.5	18.0	---	---
MONTH	14.0	7.0	18.5	10.5	23.0	14.5	22.0	16.0	22.5	14.0	21.0	11.5

14371500 GRAVE CREEK AT PEASE BRIDGE, NEAR PLACER, OR

LOCATION.--Lat 42°38'30", long 123°12'40", in SE¼ sec.6, T.34 S., R.4 W., Jackson County, Hydrologic Unit 17100310, on right bank 0.5 mi (0.8 km) downstream from Pease Bridge, 0.5 mi (0.8 km) upstream from Boulder Creek, 5.4 mi (8.7 km) east of Placer, and at mile 27.1 (43.6 km).

DRAINAGE AREA.--22.1 mi² (57.2 km²) at measuring site 0.5 mi (0.8 km) upstream.

PERIOD OF RECORD.--October 1940 to current year. Prior to October 1945 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,354.2 ft (717.56 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Aug. 4, 1955, at sites 0.5 mi (0.8 km) upstream at datum 29.9 ft (9.11 m) higher.

REMARKS.--Records good. No regulation. One small diversion above station. Prior to 1945, Columbia upper ditch diverted water about 2 mi (3 km) above station, bypassing station. Records herein are for measuring site.

AVERAGE DISCHARGE.--33 years (water years 1946-78), 59.4 ft³/s (1.682 m³/s), 36.50 in/yr (927 mm/yr), 43,040 acre-ft/yr (53.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,240 ft³/s (177 m³/s) Dec. 22, 1964, gage height, 11.20 ft (3.414 m), from rating curve extended above 1,200 ft³/s (34.0 m³/s) on basis of slope-area measurement at gage height 9.66 ft (2.944 m); minimum, 0.12 ft³/s (0.003 m³/s) July 15, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft³/s (24.1 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	2030	1,180	33.4	5.21	1.588	Jan. 16	1030	918	26.0	4.68	1.426
Dec. 14	1930	1,210	34.3	5.28	1.609	Feb. 3	0430	*1,620	45.9	*5.99	1.826

Minimum, 0.75 ft³/s (0.021 m³/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	13	70	96	57	46	36	38	17	7.4	1.4	2.0
2	4.0	16	58	90	215	42	36	36	16	9.5	1.4	1.7
3	3.2	14	72	118	1040	40	34	34	14	9.2	1.3	1.7
4	2.7	14	70	143	338	43	38	32	13	7.9	1.3	1.8
5	2.3	25	61	250	208	46	49	30	12	6.6	1.2	3.8
6	2.7	33	55	224	156	47	59	27	11	5.6	1.2	4.9
7	3.2	26	54	174	266	47	56	26	10	5.4	1.2	3.9
8	2.7	19	51	148	272	63	51	24	9.5	5.2	1.2	4.1
9	2.3	15	46	160	208	81	46	23	9.5	4.7	1.0	17
10	2.3	13	42	143	158	75	43	22	11	4.5	.92	37
11	2.0	11	96	120	123	68	38	22	10	4.5	.98	24
12	1.9	9.2	146	103	101	64	35	20	9.2	4.3	.98	13
13	1.7	9.2	208	106	85	64	31	19	8.5	4.1	1.1	9.8
14	1.7	8.6	663	110	73	63	30	20	8.5	3.8	1.3	9.5
15	1.7	8.9	551	130	70	59	29	28	8.5	3.6	1.5	7.7
16	1.6	9.6	255	537	65	53	28	28	7.9	4.1	1.7	6.6
17	1.6	8.9	185	361	65	48	26	26	7.4	3.8	1.8	6.1
18	1.7	8.6	137	253	76	45	24	24	7.9	3.4	1.7	9.2
19	1.7	8.1	103	215	96	41	25	22	8.5	3.1	1.5	9.2
20	1.7	7.6	83	174	112	39	26	19	7.4	2.9	1.5	7.9
21	1.9	15	76	154	110	37	27	18	6.8	2.6	2.2	6.8
22	1.9	127	83	137	98	35	34	18	6.3	2.5	3.9	6.1
23	2.5	92	203	113	86	52	48	18	6.3	2.2	2.9	5.4
24	4.0	484	269	94	76	70	46	27	6.8	2.1	2.9	4.9
25	14	629	185	82	68	63	45	36	7.1	2.0	6.1	4.5
26	13	455	134	72	62	57	46	32	6.8	2.0	3.6	4.3
27	8.1	215	150	64	56	50	44	30	6.3	1.8	2.8	4.1
28	6.5	141	162	58	50	45	41	27	6.3	1.8	2.5	3.9
29	7.6	106	139	53	---	42	38	25	11	1.7	2.2	3.9
30	32	89	132	49	---	42	37	22	8.2	1.6	2.0	3.8
31	20	---	113	47	---	38	---	18	---	1.5	2.0	---
TOTAL	159.7	2630.7	4652	4578	4390	1605	1146	791	278.7	125.4	59.28	228.6
MEAN	5.15	87.7	150	148	157	51.8	38.2	25.5	9.29	4.05	1.91	7.62
MAX	32	629	663	537	1040	81	59	38	17	9.5	6.1	37
MIN	1.6	7.6	42	47	50	35	24	18	6.3	1.5	.92	1.7
CFSM	.23	3.97	6.79	6.70	7.10	2.34	1.73	1.15	.42	.18	.09	.35
IN.	.27	4.43	7.83	7.71	7.39	2.70	1.93	1.33	.47	.21	.10	.38
AC-FT	317	5220	9230	9080	8710	3180	2270	1570	553	249	118	453

CAL YR 1977 TOTAL 11239.25 MEAN 30.8 MAX 663 MIN .37 CFSM 1.39 IN 18.92 AC-FT 22290
WTR YR 1978 TOTAL 20644.38 MEAN 56.6 MAX 1040 MIN .92 CFSM 2.56 IN 34.75 AC-FT 40950

14372250 ROGUE RIVER AT MARIAL, OR

LOCATION.--Lat 42°42'50", long 123°53'10" (revised), in NW¼SE¼ sec.9, T.33 S., R.10 W., Curry County, Hydrologic Unit 17100310, on right bank 0.2 mi (0.3 km) downstream from Mule Creek and at mile 48.2 (77.6 km).

DRAINAGE AREA.--3,812 mi² (9,873 km²).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: June 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 27.5°C Aug. 5, 1977; minimum recorded, 1.5°C Jan. 11, 1977, but may have been lower during period of no record in 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 25.0°C Aug. 8; minimum, 3.0°C Nov. 21.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.0	14.0	12.0	11.0	9.5	9.5					---	---
2	15.0	14.0	12.0	11.5	9.0	9.0					---	---
3	15.0	13.5	11.5	11.0	9.5	9.0					---	---
4	15.0	14.0	11.0	10.0	9.5	9.0					---	---
5	15.0	14.5	10.0	9.0	9.0	8.5					---	---
6	15.0	14.5	10.0	9.0	8.5	8.5					---	---
7	14.5	14.0	10.0	9.5	8.5	8.0					---	---
8	14.5	14.0	10.0	9.0	8.0	7.0					---	---
9	14.5	13.5	9.0	8.5	7.0	6.5					---	---
10	14.0	13.0	8.5	8.0	6.0	6.0					---	---
11	14.0	13.5	8.0	7.5	6.5	6.0					---	---
12	14.5	14.0	8.0	7.5	8.0	7.0					---	---
13	14.5	14.0	9.0	8.5	9.5	8.0					---	---
14	15.0	14.5	9.5	9.0	9.5	9.0					---	---
15	15.0	14.5	10.5	9.5	9.5	8.0					---	---
16	15.0	14.5	10.5	10.0	8.0	6.5					9.0	8.0
17	14.5	14.0	10.0	9.0	6.5	6.5					10.0	8.5
18	14.5	14.0	8.5	8.0	7.0	6.5					10.5	9.5
19	14.5	14.0	8.0	6.5	6.5	6.0					11.5	10.5
20	14.0	13.5	6.5	5.0	6.0	5.5					12.5	11.0
21	13.5	13.0	5.5	3.0	5.5	5.5					13.0	12.0
22	13.0	12.0	4.5	3.5	5.5	5.5					12.5	12.5
23	12.5	12.0	5.5	4.5	7.5	5.5					12.0	11.0
24	13.0	12.5	7.0	5.5	8.5	8.0					10.5	10.0
25	13.0	13.0	8.5	7.0	8.5	7.5					10.0	9.5
26	13.0	13.0	8.5	8.5	7.5	7.0					11.0	10.0
27	13.0	12.5	9.0	8.5	6.5	6.5					12.5	11.0
28	12.5	12.0	9.0	8.5	7.5	6.5					12.5	11.5
29	12.0	11.5	8.5	8.5	8.0	7.5					12.0	11.5
30	11.5	11.0	9.5	9.0	---	7.0					12.0	11.0
31	11.5	11.0	---	---	---	---					11.5	11.0
MONTH	15.0	11.0	12.0	3.0	9.5	5.5					13.0	8.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.0	10.0	13.0	12.0	19.0	16.5	19.5	18.5	21.0	19.0	21.0	20.0
2	9.5	9.5	13.5	12.5	20.0	17.0	18.5	17.5	22.5	19.0	21.0	20.0
3	9.5	9.0	14.5	12.5	21.0	18.0	18.5	17.5	23.0	20.0	21.0	19.5
4	9.5	9.0	14.0	12.5	21.5	18.5	19.5	17.5	23.0	20.0	20.0	18.5
5	9.5	9.0	13.5	12.0	23.5	19.5	20.5	18.0	22.5	20.5	19.0	17.5
6	9.0	8.5	14.0	11.5	22.5	19.5	21.0	18.5	24.0	20.5	17.5	16.5
7	8.5	8.0	14.5	12.5	23.5	19.5	21.5	19.0	23.5	20.5	16.5	15.5
8	9.5	8.5	16.0	14.0	24.0	20.0	22.0	20.0	25.0	21.0	17.0	15.5
9	11.0	9.5	16.5	15.0	21.0	19.5	22.0	20.5	23.5	21.5	17.0	16.0
10	12.5	11.0	16.0	15.0	19.0	17.5	21.5	19.5	23.0	21.5	16.0	15.5
11	13.5	12.0	15.5	14.0	18.5	16.5	21.0	19.0	22.5	21.0	16.5	15.0
12	13.0	12.0	15.0	13.5	18.0	16.5	21.5	19.0	21.5	20.0	17.0	15.5
13	12.5	11.5	15.0	13.5	18.0	16.5	22.5	19.5	20.5	18.5	17.0	16.0
14	11.5	11.0	15.0	14.0	17.5	16.5	22.5	20.5	19.5	17.5	17.0	15.5
15	10.5	10.0	13.5	13.0	17.5	16.0	21.5	21.0	19.5	18.0	17.0	15.5
16	10.0	9.0	13.5	12.5	18.5	16.0	20.5	19.5	19.0	17.5	17.0	15.0
17	9.5	9.0	15.0	12.5	19.5	16.5	21.0	19.0	19.0	17.0	16.0	15.0
18	10.5	9.0	16.0	13.5	19.0	18.0	20.5	18.5	19.0	16.5	15.5	14.5
19	10.5	10.0	17.0	15.0	19.0	17.5	21.0	19.0	19.5	17.5	15.0	14.0
20	10.0	9.5	18.0	16.0	20.5	18.5	23.0	19.5	19.5	18.5	15.0	13.5
21	10.5	9.5	17.0	16.0	20.5	18.5	22.5	20.0	19.5	18.0	15.5	14.0
22	10.0	9.5	16.5	15.0	21.0	19.0	23.5	20.5	18.5	17.0	16.0	14.5
23	10.5	9.5	15.5	14.5	20.0	18.5	23.0	20.5	17.0	16.5	17.0	15.0
24	11.5	10.5	14.5	13.0	18.5	17.5	22.0	20.5	17.0	16.0	17.5	16.5
25	12.0	11.0	13.0	12.5	17.5	16.5	21.5	19.5	18.0	16.5	18.0	17.0
26	12.0	11.5	13.5	12.5	18.5	16.0	21.0	20.0	19.0	17.0	17.5	17.0
27	13.0	11.5	14.5	12.5	20.5	17.0	21.0	19.5	19.5	17.5	17.5	17.0
28	13.0	12.0	16.5	14.5	21.0	18.5	22.5	18.5	21.0	19.0	17.5	16.5
29	14.0	12.5	18.0	15.5	21.0	19.5	21.5	19.0	22.0	19.5	17.0	16.0
30	13.5	12.5	18.0	15.5	20.0	19.5	22.0	19.0	21.5	20.0	17.0	16.5
31	---	---	18.0	16.0	---	---	22.0	19.5	21.0	20.0	---	---
MONTH	14.0	8.0	18.0	11.5	24.0	16.0	23.5	17.5	25.0	16.0	21.0	13.5

14372300 ROGUE RIVER NEAR AGNESS, OR
(National stream-quality accounting network station)

LOCATION.--Lat 42°34'50", long 124°03'30", in NE¼NW¼ sec.6, T.35 S., R.11 W., Curry County, Hydrologic Unit 17100310, on left bank 0.8 mi (1.3 km) upstream from Shasta Costa Creek, 1.5 mi (2.4 km) north of Agness, 2.6 mi (4.2 km) upstream from Illinois River, and at mile 29.7 (47.8 km).

DRAINAGE AREA.--3,939 mi² (10,202 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 113.81 ft (34.689 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Public Roads).

REMARKS.--Water-discharge records good. Occasional diurnal fluctuation caused by powerplants upstream; slight regulation by Fish Lake and Emigrant Lake. Many diversions for irrigation and mining.

AVERAGE DISCHARGE.--18 years, 6,300 ft³/s (178.4 m³/s), 4,564,000 acre-ft/yr (5.63 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 290,000 ft³/s (8,210 m³/s) Dec. 23, 1964, from slope-area measurement; maximum gage height, 68.03 ft (20.736 m) Dec. 23, 1964, from floodmark (backwater from Illinois River); minimum discharge, 608 ft³/s (17.2 m³/s) July 9, 10, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 35,000 ft³/s (991 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 15	0830	*69,300	1,960	*19.62	5.980
Jan. 16	1900	40,400	1,140	14.42	4.395
Feb. 3	2000	59,600	1,690	18.07	5.508

Minimum, 1,310 ft³/s (37.1 m³/s) Oct. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2450	2160	5480	10300	5020	4440	5100	4940	2790	2660	2280	1790
2	1960	2130	4810	9040	10400	4270	5420	4770	2670	2690	1990	1750
3	2460	1970	5220	9780	46800	4190	5300	4620	2570	2940	1820	1730
4	1930	2080	10100	10800	37900	4230	5420	4770	2550	2870	1780	1820
5	1630	2980	8270	17300	21400	4370	6410	3940	2520	2670	1770	2000
6	1610	2970	5790	21200	17500	4480	8520	3440	2490	2550	1830	2290
7	1620	2550	5080	16000	18500	4500	7330	3300	2440	2570	1850	2450
8	1580	2310	5750	12700	31100	5060	6050	3190	2410	2510	1830	2280
9	1550	2050	4230	11900	26500	8060	5420	3030	2450	2510	1780	2810
10	1500	1920	3810	11800	19400	7650	5100	2980	2550	2510	1790	3690
11	1490	1870	4310	10800	14200	6560	4900	2900	2750	2460	1810	3300
12	1480	1800	8540	9840	11200	6190	4640	3020	2420	2380	1830	2670
13	1460	1910	14000	9120	9460	5880	4370	3110	2660	2460	1870	2260
14	1450	1890	33000	9550	8140	5630	4370	3540	2830	2520	1910	2110
15	1430	1950	64200	10200	7650	5280	4440	4560	2730	2500	1900	2290
16	1420	1960	44000	27700	7270	4960	4960	4770	2630	2500	1930	2170
17	1420	1970	31400	30000	7000	4750	5220	4440	2540	2550	2000	2070
18	1420	1940	23200	20200	7220	4520	5120	4160	2510	2520	1930	2090
19	1410	1850	14300	17700	7180	4160	5380	3900	2630	2450	1880	2120
20	1400	1790	10500	14900	6910	4030	5730	3580	2700	2390	1860	2090
21	1390	2230	8570	12900	6560	3950	5540	3240	2610	2390	1860	2000
22	1390	10000	7650	12000	6230	4230	6100	3210	2400	2400	2170	1930
23	1440	18800	11300	10600	5920	4980	6520	3190	2440	2390	2090	1870
24	1490	19600	16300	9070	5670	6630	5770	3270	2420	2380	2160	1820
25	1590	28800	12000	8090	5440	6250	5220	3700	2460	2380	2200	1800
26	1840	27700	9240	7400	5160	5880	5180	3880	2500	2350	2270	1790
27	1980	19100	8170	6650	4900	5540	5300	3520	2440	2340	2130	1750
28	1800	12400	10700	5840	4670	5360	5240	3280	2420	2360	1990	1730
29	1780	8410	10400	5380	---	5180	5220	3190	2490	2350	1920	1690
30	2190	6430	12200	5060	---	5220	5040	3060	2700	2350	1870	1680
31	2210	---	12800	4810	---	5220	---	2970	---	2350	1820	---
TOTAL	51770	195520	425320	378630	365300	161650	164330	113470	77530	77250	60120	63830
MEAN	1670	6517	13720	12210	13050	5215	5478	3660	2584	2492	1939	2128
MAX	2460	28800	64200	30000	46800	8060	8520	4940	2920	2940	2280	3690
MIN	1390	1790	3810	4810	4670	3950	4370	2900	2410	2340	1770	1680
CFSM	.42	1.65	3.48	3.10	3.31	1.32	1.39	.93	.66	.63	.49	.54
IN.	.49	1.85	4.02	3.58	3.45	1.53	1.55	1.07	.73	.73	.57	.60
AC-FT	102700	387800	843600	751000	724600	320600	325900	225100	153800	153200	119200	126600

CAL YR 1977 TOTAL 1103015 MEAN 3022 MAX 64200 MIN 773 CFSM .77 IN 10.42 AC-FT 2188000
WTR YR 1978 TOTAL 2134720 MEAN 5849 MAX 64200 MIN 1390 CFSM 1.49 IN 20.16 AC-FT 4234000

14372300 ROGUE RIVER NEAR AGNESS, OR—Continued
(National stream quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1961 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: October 1960 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURES: Maximum, 26.5°C on several days in 1962, Aug. 3, 6, 9-11, 1977; minimum, 1.0°C Jan. 22-25, 1962, Dec. 9-16, 1972, Jan. 9, 10, 1977.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURES: Maximum recorded, 24.0°C July 22-24; minimum, 4.5°C Nov. 21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	TEMPERATURE (DEG C)	PH (UNITS)	OXYGEN, DIS-SOLVED (MG/L)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	SILICA, DIS-SOLVED (MG/L AS SIO2)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT 27...	1000	2060	12.5	6.8	10.4	114	87	230	25	9.9
NOV 29...	1000	8620	8.8	6.7	11.7	105	100	740	18	11
DEC 21...	0830	2370	6.0	7.2	12.6	114	44	300	19	12
JAN 25...	0830	8300	6.0	7.2	12.4	108	39	90	19	10
FEB 22...	1100	6140	9.5	7.3	11.4	112	33	430	19	11
MAR 22...	1000	3990	13.0	7.4	10.4	119	K4	K12	18	12
APR 19...	0930	5100	10.0	6.9	10.8	108	36	K19	16	9.6
MAY 17...	0930	4500	12.5	6.5	10.7	100	22	K5	18	9.3
JUN 13...	1000	2840	17.0	7.2	9.0	95	24	1000	21	10
JUL 25...	1100	2380	21.0	6.8	7.6	84	K6	K120	22	7.5
AUG 16...	1000	3280	18.5	7.5	9.2	87	K5	110	25	7.7
SEP 20...	1015	2070	14.5	7.2	10.1	118	K8	K3	21	11

DATE	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)
OCT 27...	4.4	6.2	1.4	49	4.6	3.9	.1	--	--
NOV 29...	4.4	4.0	1.0	43	4.0	2.8	.0	.52	--
DEC 21...	4.8	4.0	.8	44	5.0	3.0	.0	.19	--
JAN 25...	4.6	4.0	.7	45	4.0	2.3	.1	.05	.20
FEB 22...	5.1	4.1	.5	43	5.5	2.5	.1	.03	.00
MAR 22...	5.1	4.4	.9	53	5.8	2.6	.1	.13	.17
APR 19...	5.4	3.9	.7	48	--	2.2	.1	.18	.26
MAY 17...	4.4	3.9	.8	43	3.6	1.9	.1	.10	--
JUN 13...	4.2	4.5	1.0	42	3.7	2.2	.1	.11	.25
JUL 25...	3.0	4.3	1.3	34	1.7	2.0	.0	.26	.28
AUG 16...	3.0	4.7	1.3	38	2.2	2.2	.1	--	.43
SEP 20...	4.2	5.8	1.1	49	7.9	3.6	.0	.19	.35

14372300 ROGUE RIVER NEAR AGNESS, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	HARDNESS (MG/L AS CACO3)
OCT 27...	--	.06	.25	--	.09	--	--	2.1	43
NOV 29...	.07	.29	--	.06	.12	--	--	4.4	46
DEC 21...	.02	.43	--	.05	.09	--	--	2.8	50
JAN 25...	.00	.22	.42	.04	.07	--	--	--	44
FEB 22...	.02	.25	.26	.04	.05	--	--	1.7	48
MAR 22...	.00	.05	.22	.04	.05	--	--	1.6	51
APR 19...	.06	.04	.36	.01	.04	2.4	.4	--	46
MAY 17...	.01	.08	--	.02	.04	--	--	1.8	41
JUN 13...	.03	.11	.39	.05	.03	--	--	1.8	42
JUL 25...	.00	.02	.30	.06	.08	1.8	.6	--	31
AUG 16...	.02	.04	.49	.05	.06	--	--	2.2	32
SEP 20...	.02	.05	.42	.05	.06	--	--	1.8	45

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER DAY)	TURBIDITY (JTU)	TURBIDITY (NTU)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 27...	0	78	85	434	4	--	11	61	77
NOV 29...	3	81	71	1890	40	--	88	2050	66
DEC 21...	5	84	75	538	25	--	75	480	62
JAN 25...	0	71	72	1590	15	--	27	605	69
FEB 22...	6	71	73	1180	6	--	9	149	76
MAR 22...	0	76	81	819	2	--	4	43	83
APR 19...	0	64	--	881	4	--	9	124	87
MAY 17...	0	63	68	765	--	2.4	8	97	76
JUN 13...	0	67	72	514	--	1.5	10	77	80
JUL 25...	0	61	63	392	--	1.7	17	109	72
AUG 16...	0	63	69	558	--	2.4	7	62	86
SEP 20...	0	75	84	419	--	.50	4	22	92

14372300 ROGUE RIVER NEAR AGNESS, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	IRON, DIS-SOLVED (UG/L AS FE)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	ARSENIC DIS-SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)
OCT 27...	30	310	0	20	1	1	--	--	1
JAN 25...	40	1300	0	40	0	1	0	0	1
APR 19...	10	420	0	10	0	0	100	100	2
JUL 25...	40	250	0	20	2	2	200	200	4

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)
OCT 27...	10	0	10	0	<50	1	10	3	<100
JAN 25...	1	0	10	0	0	2	5	0	5
APR 19...	2	10	10	0	0	2	4	1	7
JUL 25...	4	0	0	1	2	4	8	10	22

DATE	SILVER, DIS-SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SELE-NIUM, TOTAL (UG/L AS SE)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)
OCT 27...	--	--	20	40	0	0	.0	.0
JAN 25...	0	0	10	40	0	0	.0	.0
APR 19...	0	0	10	40	0	0	.0	.0
JUL 25...	0	0	10	20	0	0	.0	.0

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SIMA-ZINE TOTAL COUL-SON COND. (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)
NOV 29...	ND	ND	ND	ND	ND	ND	ND	ND
FEB 22...	--	ND	ND	ND	ND	ND	ND	ND
MAY 17...	ND	ND	ND	ND	ND	ND	ND	ND
AUG 16...	ND	ND	ND	ND	ND	ND	ND	ND

DATE	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)
NOV 29...	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 22...	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 17...	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
NOV 29...	ND	ND	ND	ND	ND	ND	ND	ND
FEB 22...	ND	ND	--	--	--	--	ND	ND
MAY 17...	ND	ND	ND	--	--	--	ND	ND
AUG 16...	ND	ND	ND	--	--	--	ND	ND

14372300 ROGUE RIVER NEAR AGNESS, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO AUGUST 1978

DATE	OCT 27,77		NOV 29,77		APR 19,78		MAY 17,78	
TIME	1000		1000		0930		0930	
TOTAL CELLS/ML	7500		640		330		19000	
DIVERSITY: DIVISION	1.1		0.5		0.0		0.2	
.CLASS	1.1		0.5		0.0		0.2	
..ORDER	1.4		0.5		0.0		0.9	
...FAMILY	1.6		0.5		1.8		1.0	
....GENUS	1.7		0.5		2.0		1.0	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	7	1	--	-	--	-
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	--	-	--	-	--	-
....CLOSTERIDIUM	--	-	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	54	1	--	-	--	-	--	-
..TETRASPORALES								
...PALMELLACEAE								
....GLOEOCYSTIS	--	-	--	-	--	-	--	-
....SPHAEROCYSTIS	--	-	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-
..ZYGNEMATALES								
...DESMIDIACEAE								
....STAURASTRUM	*	0	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	220	3	--	-	--	-	--	-
....MELOSIRA	2400#	32	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	--	-	--	-
....COCCONEIS	--	-	*	0	--	-	--	-
....RHOICOSPHENIA	--	-	*	0	--	-	--	-
...CYMBELLACEAE								
....AMPHORA	--	-	7	1	--	-	--	-
....CYMBELLA	*	0	7	1	14	4	*	0
...DIATOMACEAE								
....DIATOMA	--	-	--	-	27	8	--	-
...EUNOTIACEAE								
....EUNOTIA	--	-	--	-	--	-	--	-
...FRAGILARIACEAE								
....FRAGILARIA	--	-	30	5	--	-	--	-
....HANNAEA	--	-	--	-	14	4	--	-
....SYNEDRA	240	3	--	-	55#	17	--	-
...GOMPHONEMATACEAE								
....GOMPHONEIS	190	3	--	-	--	-	--	-
....GOMPHONEMA	--	-	--	-	41	13	--	-
...NAVICULACEAE								
....NAVICULA	160	2	*	0	180#	54	270	1
...NITZSCHIACEAE								
....NITZSCHIA	81	1	*	0	--	-	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROCCOCCALES								
...CHROCCOCCAEAE								
....ANACYSTIS	4100#	55	590#	92	--	-	4400#	23
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	14000#	74
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....TRACHELOMONAS	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

14372300 ROGUE RIVER NEAR AGNESS, OR—Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO AUGUST 1978

	JUN 13,78	JUL 25,78	AUG 16,78
DATE	JUN 13,78	JUL 25,78	AUG 16,78
TIME	1000	1100	1000
TOTAL CELLS/ML	1800	3100	2700
DIVERSITY: DIVISION	1.2	1.3	1.5
.CLASS	1.2	1.3	1.5
..ORDER	1.9	2.1	2.1
...FAMILY	3.2	3.3	2.7
....GENUS	3.6	3.6	2.8

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	--	-	--	-	--	-
...COELASTRACEAE						
....COELASTRUM	250	14	160	5	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	58	3	69	2	22	1
....CLOSTERIDIUM	--	-	--	-	67	2
....TETRAEDRON	--	-	--	-	22	1
...SCENEDESMACEAE						
....SCENEDESMUS	58	3	560#	18	270	10
..TETRASPORALES						
...PALMELLACEAE						
....GLOEOCYSTIS	--	-	--	-	180	7
....SPHAEROCYSTIS	--	-	69	2	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	17	1	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....STAURASTRUM	--	-	--	-	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	300#	17	710#	23	840#	31
....MELOSIRA	72	4	--	-	--	-
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	29	2	120	4	22	1
....COCCONEIS	190	10	240	8	44	2
....RHOICOSPHENIA	120	6	52	2	110	4
...CYMBELLACEAE						
....AMPHORA	--	-	--	-	--	-
....CYMBELLA	200	11	17	1	--	-
...DIATOMACEAE						
....DIATOMA	14	1	--	-	44	2
...EUNOTIACEAE						
....EUNOTIA	--	-	17	1	--	-
...FRAGILARIACEAE						
....FRAGILARIA	--	-	160	5	44	2
....HANNAEA	--	-	--	-	--	-
....SYNEDRA	--	-	52	2	--	-
...GOMPHONEMATACEAE						
....GOMPHONEIS	86	5	52	2	--	-
....GOMPHONEMA	--	-	69	2	67	2
...NAVICULACEAE						
....NAVICULA	100	6	280	9	44	2
...NITZSCHIACEAE						
....NITZSCHIA	140	8	100	3	89	3
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROCCOCCALES						
...CHROCCOCCAEAE						
....ANACYSTIS	58	3	87	3	840#	31
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	--	-	--	-
...OSCILLATORIACEAE						
....OSCILLATORIA	120	6	230	7	--	-
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....TRACHELOMONAS	14	1	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

14372300 ROGUE RIVER NEAR AGNESS, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.5	14.0	12.0	11.5	10.0	9.5	7.0	6.5	8.0	7.5	9.0	8.0
2	15.5	14.0	12.5	11.5	10.0	9.5	6.5	6.5	7.5	7.0	8.5	8.0
3	15.5	14.0	11.5	11.0	10.0	9.5	7.5	6.5	8.5	7.5	9.0	8.0
4	15.5	14.0	11.0	10.0	10.0	9.5	8.0	7.5	9.0	8.5	9.5	8.5
5	16.0	14.0	10.0	10.0	9.5	9.0	8.0	8.0	8.5	8.5	10.5	9.5
6	15.0	14.5	10.0	9.5	9.5	9.0	8.5	8.0	8.5	8.5	11.0	10.0
7	15.5	14.0	10.5	9.5	9.0	8.5	8.0	8.0	8.5	8.0	10.0	10.0
8	15.5	14.0	10.0	9.0	8.5	7.5	8.5	8.0	8.5	7.5	10.0	10.0
9	15.5	13.5	9.5	9.0	7.5	7.0	9.0	8.5	7.5	7.5	10.0	9.5
10	15.0	13.5	9.5	8.5	7.0	6.5	9.0	9.0	7.5	7.0	10.0	9.5
11	15.0	13.0	8.5	8.5	7.5	6.5	9.0	8.5	7.0	6.0	10.0	9.0
12	15.0	13.5	9.0	8.0	8.0	7.0	8.5	8.0	6.5	6.0	10.0	9.0
13	15.5	14.0	9.5	8.5	9.5	8.0	8.5	8.0	7.5	6.5	10.0	9.0
14	15.5	14.0	9.5	9.0	10.0	9.5	9.0	8.5	7.5	7.0	---	8.5
15	16.0	14.5	10.5	9.5	9.5	8.5	8.5	8.5	7.5	7.0	---	---
16	16.0	14.0	11.0	10.0	8.5	7.0	8.5	8.0	7.5	7.0	---	---
17	15.5	14.0	10.0	9.0	7.0	7.0	9.0	8.5	7.5	7.0	---	---
18	15.5	14.0	9.0	8.0	7.0	7.0	9.0	8.5	8.0	7.0	---	---
19	15.5	14.0	8.0	7.0	7.0	6.5	8.5	8.5	9.0	8.0	---	---
20	14.5	14.0	7.0	6.0	6.5	6.0	9.0	8.5	10.0	9.0	---	---
21	14.5	13.5	5.5	4.5	6.0	6.0	9.0	8.5	10.0	9.0	---	---
22	13.5	13.0	6.0	5.0	7.5	6.0	8.5	8.0	10.0	9.5	---	---
23	13.5	12.5	6.5	5.5	8.5	7.5	8.0	7.0	10.0	9.5	---	---
24	13.5	12.5	8.0	6.5	9.0	8.5	7.0	6.0	10.0	9.5	---	---
25	13.5	13.0	9.0	7.5	8.5	7.5	6.0	6.0	10.0	9.5	---	---
26	14.0	13.0	9.0	8.5	7.5	7.0	7.0	6.0	10.0	9.5	---	---
27	13.0	12.5	9.0	9.0	7.0	7.0	7.5	7.0	9.5	9.0	---	---
28	13.0	12.5	9.0	9.0	8.0	7.0	8.0	7.5	9.5	8.5	---	---
29	12.5	11.5	9.0	9.0	8.0	8.0	8.0	7.5	---	---	---	---
30	12.0	11.5	9.5	9.0	8.0	7.5	8.0	7.5	---	---	---	---
31	12.0	11.0	---	---	7.5	7.0	7.5	7.5	---	---	---	---
MONTH	16.0	11.0	12.5	4.5	10.0	6.0	9.0	6.0	10.0	6.0	11.0	8.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1			---	---	19.5	18.5	---	---	22.5	20.0	---	---
2			14.5	---	20.0	18.0	---	---	23.0	20.5	---	---
3			15.0	12.5	21.0	19.0	---	---	23.0	20.5	---	---
4			14.5	13.0	22.0	19.5	---	---	23.5	20.5	---	---
5			14.0	12.5	22.5	20.5	---	---	---	---	---	---
6			14.5	12.5	22.5	21.0	---	---	---	---	18.0	---
7			15.5	13.0	23.0	21.0	---	---	---	---	18.0	16.5
8			16.5	14.0	22.0	19.5	---	---	---	---	---	---
9			17.0	15.5	19.5	18.0	---	---	---	---	17.0	16.0
10			16.0	15.0	19.5	17.5	---	---	---	---	16.5	15.5
11			16.0	15.0	18.5	17.5	22.0	20.5	---	---	17.0	15.5
12			15.5	14.5	---	17.5	22.5	20.0	---	---	17.5	16.0
13			15.0	14.5	---	---	23.0	20.5	---	---	17.5	16.0
14			15.0	14.5	20.0	17.0	23.5	21.5	---	---	18.5	16.0
15			14.5	13.0	---	---	22.0	21.0	---	---	18.0	16.0
16			14.5	12.5	20.5	18.5	22.5	20.5	---	---	17.5	15.5
17			15.0	12.5	21.0	18.5	22.0	19.5	---	---	17.0	15.5
18			17.0	13.5	---	---	22.0	20.0	---	---	17.0	15.0
19			18.5	16.0	---	---	22.0	20.0	---	---	16.5	14.5
20			17.0	15.5	---	---	23.0	20.5	---	---	16.0	14.5
21			17.0	15.0	---	---	23.5	21.0	---	---	16.5	14.5
22			15.5	14.5	---	---	24.0	21.5	---	---	17.0	14.5
23			14.5	13.5	---	---	24.0	22.0	---	---	18.0	15.0
24			13.5	12.5	---	---	24.0	22.0	---	---	18.5	16.0
25			13.5	12.5	---	---	23.5	21.0	---	---	18.5	17.0
26			15.0	13.0	---	---	22.5	20.5	---	---	19.0	17.0
27			17.0	15.0	---	---	22.5	20.5	---	---	19.0	17.0
28			18.0	16.0	---	---	22.0	20.5	---	---	19.0	17.0
29			18.0	16.5	---	---	22.5	20.5	---	---	18.5	16.5
30			18.5	17.0	---	---	22.5	20.5	---	---	18.0	16.0
31			---	---	---	---	22.5	20.5	---	---	---	---
MONTH			18.5	12.5	23.0	17.0	24.0	19.5	23.5	20.0	19.0	14.5

14372500 EAST FORK ILLINOIS RIVER NEAR TAKILMA, OR

LOCATION.--Lat 42°00'10", long 123°37'30", in SE¼NE¼ sec.15, T.41 S., R.8 W., Josephine County, Hydrologic Unit 17100311, Siskiyou National Forest, on right bank 0.3 mi (0.5 km) downstream from Dunn Creek (California-Oregon State line), 3.4 mi (5.5 km) south of Takilma, and at mile 71.2 (114.6 km).

DRAINAGE AREA.--42.3 mi² (109.6 km²).

PERIOD OF RECORD.--April to September 1926, April 1927 to April 1932, October 1940 to current year. Monthly discharge only for some periods, published in WSP 1318. Records prior to 1942 water year not equivalent owing to large diversions.

REVISED RECORDS.--WSP 1184: 1948. WSP 1288: 1951(P). WSP 1398: 1946, 1947(M), 1949. WSP 1738: Drainage area (former site).

GAGE.--Water-stage recorder. Altitude of gage is 1,780 ft (543 m), from topographic map. Prior to Oct. 31, 1946, nonrecording gage at sites 0.6 mi (1.0 km) downstream at different datums. Oct. 31, 1946, to May 13, 1949, nonrecording gage and May 14, 1949, to Aug. 23, 1965, water-stage recorder at site 0.6 mi (1.0 km) downstream at datum 1,746.6 ft (532.36 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No regulation. Two small diversions for irrigation above station.

AVERAGE DISCHARGE.--37 years (water years 1942-78), 181 ft³/s (5.126 m³/s), 58.11 in/yr (1,476 mm/yr), 131,100 acre-ft/yr (162 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s (445 m³/s) Dec. 22, 1964, gage height, 14.90 ft (4.542 m), present site and datum, from floodmark, from rating curve extended above 4,400 ft³/s (125 m³/s) on basis of slope-area measurement of peak flow; minimum, 4.6 ft³/s (0.13 m³/s) Nov. 3, 1960.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	2330	*3,330	94.3	*7.84	2.390
Dec. 14	1230	3,110	88.1	7.64	2.329
Feb. 3	0730	3,310	93.7	7.77	2.368

Minimum, 8.0 ft³/s (0.23 m³/s) Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	104	176	269	178	149	168	146	80	31	14	8.7
2	43	103	151	279	894	144	161	140	80	31	14	8.3
3	36	84	198	392	2340	146	149	147	81	31	13	8.7
4	31	138	193	389	927	187	151	138	81	30	13	19
5	28	309	166	655	714	204	214	126	81	28	13	44
6	30	249	153	650	723	207	227	118	74	27	12	33
7	29	162	147	447	1070	241	187	115	68	26	12	26
8	26	123	135	473	826	528	166	121	64	26	11	25
9	24	96	123	673	637	389	166	137	61	24	9.8	140
10	22	78	113	492	444	295	202	131	60	21	9.4	251
11	20	77	466	382	326	244	216	130	54	20	9.4	121
12	19	72	500	366	269	214	189	117	50	19	12	68
13	18	95	1790	426	232	207	168	123	49	19	15	52
14	18	89	2600	563	211	200	153	153	46	18	12	43
15	17	96	2060	857	207	181	147	200	43	19	12	37
16	16	93	927	1440	193	164	138	168	41	20	12	33
17	16	77	709	1070	191	159	131	155	41	19	12	30
18	15	68	500	761	218	162	135	146	41	19	12	29
19	15	61	347	709	266	168	170	147	40	18	11	26
20	14	55	269	528	301	172	193	147	40	17	11	25
21	14	910	232	430	301	185	181	144	38	16	16	24
22	13	1600	230	382	282	200	170	130	36	15	18	22
23	16	821	532	309	266	266	162	112	35	15	14	21
24	20	2020	551	253	244	276	164	103	35	15	18	21
25	140	1410	376	220	225	234	187	93	35	14	31	22
26	104	1530	279	196	200	220	187	87	33	14	17	21
27	67	599	379	174	178	209	174	81	32	14	13	21
28	54	357	412	159	161	198	168	86	32	15	12	21
29	70	261	385	149	---	187	159	90	34	15	10	20
30	239	214	462	140	---	178	157	86	33	15	9.8	19
31	149	---	357	133	---	172	---	81	---	15	9.4	---
TOTAL	1381	11951	15918	14366	13024	6686	5140	3898	1518	626	407.8	1239.7
MEAN	44.5	398	513	463	465	216	171	126	50.6	20.2	13.2	41.3
MAX	239	2020	2600	1440	2340	528	227	200	81	31	31	251
MIN	13	55	113	133	161	144	131	81	32	14	9.4	8.3
CFSM	1.05	9.41	12.1	10.9	11.0	5.11	4.04	2.98	1.20	.48	.31	.98
IN.	1.21	10.51	14.00	12.63	11.45	5.88	4.52	3.43	1.33	.55	.36	1.09
AC-FT	2740	23700	31570	28490	25830	13260	10200	7730	3010	1240	809	2460

CAL YR 1977 TOTAL 42612.7 MEAN 117 MAX 2600 MIN 5.4 CFSM 2.77 IN 37.47 AC-FT 84520
WTR YR 1978 TOTAL 76155.5 MEAN 209 MAX 2600 MIN 8.3 CFSM 4.94 IN 66.97 AC-FT 151100

14375100 SUCKER CREEK BELOW LITTLE GRAYBACK CREEK, NEAR HOLLAND, OR

LOCATION.--Lat 42°09'35", long 123°28'40", in NE¼SW¼ sec.24, T.39 S., R.7 W., Josephine County, Hydrologic Unit 17100311, on right bank 500 ft (152 m) downstream from Little Grayback Creek, 2.0 mi (3.2 km) downstream from Grayback Creek, 3.7 mi (6.0 km) northeast of Holland, and at mile 9.3 (15.0 km).

DRAINAGE AREA.--83.9 mi² (217.3 km²).

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,713.92 ft (522.403 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Altitude of gage is 1,700 ft (518 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Grayback Canal and 3 small diversions from Grayback and Cave Creeks divert water for domestic use and irrigation above station. Return flow from these diversions enters creek above station.

AVERAGE DISCHARGE.--13 years, 243 ft³/s (6.882 m³/s), 39.33 in/yr (999 mm/yr), 176,100 acre-ft/yr (217 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,550 ft³/s (242 m³/s) Jan. 15, 1974, gage height, 8.20 ft (2.499 m); minimum, 12 ft³/s (0.34 m³/s) Oct. 20, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1940, 10.8 ft (3.292 m) on Dec. 22, 1964, from floodmark, discharge, 19,300 ft³/s (547 m³/s), from estimate based on slope-area measurement of peak flow at site 0.7 mi (1.1 km) upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 25	Unknown	Unknown	-	-	-	Jan. 16	0930	1,620	45.9	4.12	1.256
Dec. 14	-	*3,360	95.2	*5.60	1.707	Feb. 3	0930	3,070	86.9	5.40	1.646

Minimum, 23 ft³/s (0.65 m³/s) Oct. 18-20, 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	50	300	413	345	285	325	233	182	81	36	32
2	43	80	270	393	663	276	309	225	177	84	36	32
3	38	70	330	418	2140	271	295	233	177	81	36	32
4	33	75	350	429	1160	290	300	221	182	76	35	41
5	31	100	280	656	965	285	335	209	182	74	35	79
6	36	80	250	663	903	276	354	205	173	69	35	71
7	35	70	230	581	1150	295	335	205	164	69	32	58
8	31	65	200	581	1070	439	319	213	156	67	32	48
9	30	60	180	723	880	418	325	221	149	64	31	177
10	27	55	170	631	723	378	364	217	153	64	30	229
11	26	60	450	557	599	359	359	221	138	62	31	122
12	26	65	500	510	528	330	325	205	132	60	32	81
13	25	65	1700	510	455	319	305	217	125	60	35	69
14	25	60	2500	557	413	295	285	249	119	58	32	64
15	25	65	1800	729	388	276	285	281	115	56	32	56
16	24	80	1200	1350	364	262	262	241	109	58	35	54
17	24	65	900	1150	359	258	245	221	106	56	33	52
18	24	55	700	934	383	262	241	221	106	54	32	52
19	23	50	560	850	398	262	271	229	103	52	31	50
20	24	50	460	729	403	267	276	237	109	52	32	46
21	24	150	403	669	403	285	267	241	101	50	43	44
22	24	550	368	612	393	305	258	225	95	48	44	44
23	29	350	522	545	388	403	249	209	95	46	36	43
24	33	1200	551	493	383	393	249	221	95	46	43	41
25	101	1000	471	455	368	359	262	205	92	44	74	39
26	60	1700	408	418	345	354	258	200	87	43	43	38
27	43	800	466	383	325	349	249	195	84	43	38	38
28	38	450	455	359	300	340	245	195	84	41	35	38
29	46	400	466	335	---	340	241	191	84	41	33	36
30	81	350	505	314	---	349	249	182	81	39	33	35
31	60	---	466	305	---	335	---	177	---	39	33	---
TOTAL	1141	8270	18411	18252	17194	9915	8642	6745	3755	1777	1118	1841
MEAN	36.8	276	594	589	614	320	288	218	125	57.3	36.1	61.4
MAX	101	1700	2500	1350	2140	439	364	281	182	84	74	229
MIN	23	50	170	305	300	258	241	177	81	39	30	32
CFSM	.44	3.29	7.08	7.02	7.32	3.81	3.43	2.60	1.49	.68	.43	.73
IN.	.51	3.67	8.16	8.09	7.62	4.40	3.83	2.99	1.66	.79	.50	.82
AC-FT	2260	16400	36520	36200	34100	19670	17140	13380	7450	3520	2220	3650

CAL YR 1977 TOTAL 44388 MEAN 122 MAX 2500 MIN 15 CFSM 1.45 IN 19.68 AC-FT 88040
WTR YR 1978 TOTAL 97061 MEAN 266 MAX 2500 MIN 23 CFSM 3.17 IN 43.03 AC-FT 192500

NOTE.--No gage-height record Nov. 2 to Dec. 19.

14375500 WEST FORK ILLINOIS RIVER BELOW ROCK CREEK, NEAR O'BRIEN, OR

LOCATION.--Lat 42°02'20", long 123°44'50", in SW¼SE¼ sec.34, T.40 S., R.9 W., Josephine County, Hydrologic Unit 17100311, Siskiyou National Forest, on left bank 0.2 mi (0.3 km) downstream from Rock Creek, 3.0 mi (4.8 km) southwest of O'Brien, and at mile 12.8 (20.6 km).

DRAINAGE AREA.--42.4 mi^2 (109.8 km^2).

PERIOD OF RECORD.--September 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,516.14 ft (462.119 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Occasional diurnal fluctuation caused by logpond upstream. Three small diversions from Elk Creek for irrigation above station.

AVERAGE DISCHARGE.--24 years, 218 ft^3/s (6.174 m^3/s), 69.82 in/yr (1,773 mm/yr), 157,900 acre-ft/yr (195 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft^3/s (456 m^3/s) Dec. 22, 1964, gage height, 16.05 ft (4.892 m), from rating curve extended above 6,200 ft^3/s (176 m^3/s), on basis of slope-area measurement at gage height 14.79 ft (4.508 m); minimum, 1.5 ft^3/s (0.042 m^3/s) Sept. 2-4, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft^3/s (70.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 22	1430	3,870	110	9.68	2.950
Dec. 14	2400	*4,360	123	*10.12	3.085
Jan. 16	0930	2,790	79.0	8.58	2.615
Feb. 3	0700	4,280	121	10.05	3.063

Minimum, 6.0 ft^3/s (0.17 m^3/s) Aug. 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	131	178	412	313	116	97	106	53	21	7.9	8.8
2	48	142	149	350	1650	111	158	94	50	22	7.7	8.5
3	40	116	271	613	3130	104	178	86	47	22	7.7	7.4
4	35	257	291	669	1170	118	245	80	44	20	7.4	20
5	31	822	233	1470	846	143	672	74	42	19	7.4	53
6	33	456	232	1430	949	149	534	69	39	17	7.1	39
7	32	237	260	802	1650	184	329	65	37	16	6.9	25
8	30	156	215	579	1390	544	247	61	36	15	6.7	39
9	28	118	175	683	1140	439	212	59	36	14	6.4	259
10	26	94	145	531	720	313	193	57	40	14	6.2	621
11	24	87	940	447	506	239	166	59	37	14	6.2	252
12	23	79	1010	500	406	194	142	53	34	14	6.9	123
13	22	117	2760	431	343	170	125	48	36	12	7.9	84
14	21	114	3680	417	318	149	121	62	33	8.5	7.4	61
15	21	130	2820	743	350	132	148	283	31	8.8	6.7	45
16	20	128	1580	2070	311	121	183	289	30	11	6.7	37
17	20	107	1380	1340	313	109	237	181	29	11	6.4	30
18	18	90	897	927	333	101	232	138	30	11	6.4	26
19	18	79	596	949	311	93	362	112	29	11	6.4	22
20	18	71	442	770	269	86	468	98	28	10	6.7	19
21	17	1320	362	626	230	82	401	94	27	9.5	8.8	18
22	17	3000	420	582	198	78	370	94	26	9.9	9.5	17
23	25	1710	1440	450	176	232	352	86	27	8.8	8.5	15
24	47	2680	1110	345	159	393	285	94	29	9.2	15	14
25	420	1600	613	277	152	259	235	92	28	8.8	34	13
26	206	1730	422	228	141	194	194	82	27	8.8	15	13
27	117	724	506	194	132	158	164	75	25	9.2	11	12
28	88	425	494	169	123	134	142	69	25	9.2	10	11
29	169	291	528	151	---	118	126	64	23	8.8	9.5	11
30	375	221	949	135	---	106	118	60	20	8.5	9.2	11
31	198	---	606	126	---	97	---	56	---	8.2	9.2	---
TOTAL	2250	17232	25704	19416	17729	5466	7436	2940	998	390.2	278.8	1914.7
MEAN	72.6	574	829	626	633	176	248	94.8	33.3	12.6	8.99	63.8
MAX	420	3000	3680	2070	3130	544	672	289	53	22	34	621
MIN	17	71	145	126	123	78	97	48	20	8.2	6.2	7.4
CFSM	1.71	13.5	19.6	14.8	14.9	4.15	5.85	2.24	.79	.30	.21	1.51
IN.	1.97	15.12	22.55	17.03	15.55	4.80	6.52	2.58	.88	.34	.24	1.68
AC-FT	4460	34180	50980	38510	35170	10840	14750	5830	1980	774	553	3800

CAL YR 1977 TOTAL 61843.7 MEAN 169 MAX 3680 MIN 2.3 CFSM 3.99 IN 54.26 AC-FT 122700
WTR YR 1978 TOTAL 101754.7 MEAN 279 MAX 3680 MIN 6.2 CFSM 6.58 IN 89.27 AC-FT 201800

14377100 ILLINOIS RIVER NEAR KERBY, OR

LOCATION.--Lat 42°13'55", long 123°39'45", in SE¼SE¼ sec.29, T.38 S., R.8 W., Josephine County, Hydrologic Unit 17100311, Siskiyou National Forest, on right bank 1.6 mi (2.6 km) upstream from Josephine Creek, 2.5 mi (4.0 km) northwest of Kerby, and at mile 50.3 (80.9 km).

DRAINAGE AREA.--380 mi^2 (984 km^2).

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,198.08 ft (365.175 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 28, 1965, water-stage recorder, and Jan. 28 to Sept. 30, 1965, nonrecording gage 70C ft (213 m) downstream at datum 2.99 ft (0.911 m) lower.

REMARKS.--Records good. No regulation. Diversions for irrigation above station. Some diversions for mining and logpond operation.

AVERAGE DISCHARGE.--17 years, 1,311 ft^3/s (37.13 m^3/s), 46.85 in/yr (1,190 mm/yr), 949,800 acre-ft/yr (1.17 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 92,200 ft^3/s (2,610 m^3/s) Dec. 22, 1964, gage height, 45.28 ft (13.801 m), from floodmark, site and datum then in use, from rating curve extended above 30,000 ft^3/s (850 m^3/s) on basis of slope-area measurement of peak flow; minimum, 14 ft^3/s (0.40 m^3/s) Aug. 11, 13, 14, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 11,000 ft^3/s (312 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 24	1430	17,700	501	20.76	6.328
Dec. 14	1930	22,100	626	23.25	7.087
Jan. 16	1130	16,300	462	19.90	6.066
Feb. 3	1130	*25,400	719	*24.95	7.605

Minimum, 31 ft^3/s (0.88 m^3/s) Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	441	710	1490	2560	1820	1160	1110	1060	509	134	40	62
2	337	693	1250	2290	7680	1120	1220	973	490	137	40	61
3	280	662	1620	3420	20000	1080	1240	936	468	152	41	59
4	243	672	1830	3840	8320	1200	1410	893	445	141	40	72
5	218	2610	1550	6640	5860	1310	2520	840	416	136	40	130
6	216	2080	1420	7010	6000	1360	2660	785	392	127	40	242
7	222	1250	1540	4650	8960	1400	2010	755	360	120	38	190
8	197	886	1320	3820	8050	3060	1690	735	340	127	39	184
9	180	703	1110	4380	6680	2760	1540	752	327	120	41	687
10	168	584	952	3700	4640	2220	1570	738	331	104	38	2330
11	157	519	3680	3070	3530	1890	1550	752	333	95	38	1430
12	146	[illegible]	4720	3120	2900	1650	1360	709	301	94	38	799
13	137	562	11600	2930	2480	1490	1230	677	294	87	38	582
14	135	629	18300	3070	2210	1380	1160	729	286	81	38	463
15	130	610	16300	4720	2210	1270	1220	1370	272	69	38	381
16	127	646	9130	12000	2020	1170	1270	1680	252	67	38	327
17	120	565	7940	8280	1980	1100	1360	1270	240	69	37	290
18	118	505	5420	6050	2090	1070	1390	1070	224	69	41	272
19	112	455	3820	5880	2110	1040	1730	969	217	69	51	256
20	110	414	2890	4920	2040	1010	2160	904	210	66	34	232
21	107	3240	2360	4020	1940	1020	1910	843	204	62	43	215
22	105	13300	2330	3630	1820	1050	1840	785	188	64	45	200
23	113	7800	5000	2950	1710	1470	1920	715	174	57	47	190
24	148	12500	5500	2460	1610	2350	1660	722	167	54	50	174
25	994	7950	3500	2130	1520	1870	1570	719	154	55	69	167
26	990	10600	3200	1880	1440	1600	1470	674	137	57	81	159
27	603	4850	3000	1660	1340	1450	1320	636	138	51	67	149
28	464	3100	3200	1490	1240	1330	1230	609	133	50	63	147
29	444	2270	3040	1340	---	1250	1140	588	134	47	61	141
30	1480	1820	4450	1230	---	1210	1110	564	131	40	62	136
31	1020	---	3350	1160	---	1130	---	535	---	41	63	---
TOTAL	10262	83690	136812	120300	114200	45470	46570	25987	8267	2642	1439	10727
MEAN	331	2790	4413	3881	4079	1467	1552	838	276	85.2	46.4	358
MAX	1480	13300	18300	12000	20000	3060	2660	1680	509	152	81	2330
MIN	105	414	952	1160	1240	1010	1110	535	131	40	34	59
CFSM	.87	7.34	11.6	10.2	10.7	3.86	4.08	2.21	.73	.22	.12	.94
IN.	1.00	8.19	13.39	11.78	11.18	4.45	4.56	2.54	.81	.26	.14	1.05
AC-FT	20350	166000	271400	238600	226500	90190	92370	51550	16400	5240	2850	21280

CAL YR 1977 TOTAL 321733 MEAN 881 MAX 18300 MIN 14 CFSM 2.32 IN 31.50 AC-FT 638200
WTR YR 1978 TOTAL 606366 MEAN 1661 MAX 20000 MIN 34 CFSM 4.37 IN 59.36 AC-FT 1203000

14378200 ILLINOIS RIVER NEAR AGNESS, OR

LOCATION.--Lat 42°31'15", long 124°02'35", in SW¼NW¼ sec.29, T.35 S., R.11 W., Curry County, Hydrologic Unit 17100311, on right bank 0.6 mi (1.0 km) downstream from Lawson Creek, 1.4 mi (2.3 km) upstream from Fox Creek, 2.8 mi (4.5 km) southeast of Agness, and at mile 3.0 (4.8 km).

DRAINAGE AREA.--988 mi^2 (2,559 km^2), at cable section 2.1 mi (3.4 km) downstream where all measurements are made.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 125.86 ft (38.362 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. No regulation. Many diversions above station for irrigation, mining, and logpond operation. Records include flow of Fox Creek. All records given herein are for measuring site.

AVERAGE DISCHARGE.--18 years, 4,276 ft^3/s (134.5 m^3/s), 58.77 in/yr (1,493 mm/yr), 3,098,000 acre-ft/yr (3.82 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 225,000 ft^3/s (6,370 m^3/s) Dec. 22, 1964, estimated on basis of runoff ratio with station near Selma; maximum gage height, 56.91 ft (17.346 m) Dec. 22, 1964, from floodmark (backwater from Rogue River); minimum discharge, 125 ft^3/s (3.54 m^3/s) Sept. 14-16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 35,000 ft^3/s (991 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 24	unknown	55,200	1,560	17.67	5.386
Dec. 14	2230	76,800	2,170	19.64	5.986
Jan. 16	unknown	48,000	1,360	-	-
Feb. 3	unknown	*a80,000	2,270	-	-

Minimum, 245 ft^3/s (6.94 m^3/s) Aug. 6, 7, 21.

a Estimated on basis of runoff ratio with station near Kirby (see station 14377100).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1190	2310	4430	7000	7000	3050	2720	3240	1410	555	286	296
2	905	2300	3830	8000	20000	2950	3030	2990	1270	540	279	293
3	753	2090	5050	9000	55000	3000	3290	2850	1280	489	279	289
4	646	2470	5080	12000	30000	3220	3650	2700	1220	560	275	418
5	576	7760	4370	18000	18000	3530	6080	2510	1150	535	275	672
6	607	7090	4190	19000	17000	3700	6820	2340	1080	515	254	755
7	620	4350	4370	13000	25100	3820	5030	2230	1040	502	260	755
8	563	3070	3950	11000	25800	4380	4400	2120	1000	489	263	1070
9	513	2390	3460	12000	20100	6700	3680	2030	967	480	257	5010
10	475	1970	3050	9500	14000	5600	3350	1990	967	447	254	7550
11	444	1770	6820	8500	10400	4770	3220	1980	914	451	251	4570
12	418	1670	11500	8500	9040	4190	3020	1910	929	402	254	2640
13	393	1880	34000	8000	7990	3680	2980	1790	929	426	263	1910
14	379	1970	58700	8000	6990	3330	3200	2280	848	410	263	1570
15	366	2080	54400	15000	6890	3040	3330	4440	848	397	260	1290
16	352	2160	28000	32000	6250	2870	3440	5010	812	402	263	1120
17	341	1950	24300	20000	6060	2730	4040	3800	783	393	257	997
18	337	1730	16000	16000	6430	2580	5530	3100	755	381	254	982
19	330	1560	11100	16000	6430	2420	7140	2820	694	362	248	899
20	319	1420	8710	13000	6110	2370	7680	2570	707	373	254	826
21	315	3740	7200	11000	5620	2290	6890	2380	689	362	269	748
22	311	31600	6000	9500	5130	2260	7550	2200	666	355	275	741
23	375	24600	10000	7500	4670	2940	7470	2030	655	348	279	707
24	640	36600	12000	7890	4310	5360	6700	2100	649	337	600	677
25	1420	23200	7500	6730	4130	4610	6060	2110	643	325	714	643
26	2530	19000	6000	5810	3940	3800	5490	1980	616	318	438	565
27	1630	13800	7500	5080	3530	3350	4690	1860	590	314	381	530
28	1250	9070	8000	4510	3220	2910	4260	1760	565	314	344	510
29	2030	6730	9000	4020	---	2880	3860	1670	530	307	325	480
30	4530	5400	11000	3400	---	2860	3510	1590	560	279	310	520
31	3400	---	9000	3400	---	2780	---	1510	---	296	293	---
TOTAL	28958	227730	391010	332340	339140	107970	142110	75890	25766	12664	9477	40033
MEAN	934	7591	12610	10720	12110	3483	4737	2448	859	409	306	1334
MAX	4530	36600	58700	32000	55000	6700	7680	5010	1410	560	714	7550
MIN	311	1420	3050	3400	3220	2260	2720	1510	530	279	248	289
CFSM	.95	7.68	12.8	10.9	12.3	3.53	4.80	2.48	.87	.41	.31	1.35
IN.	1.09	8.57	14.72	12.51	12.77	4.07	5.35	2.86	.97	.48	.36	1.51
AC-FT	57440	451700	775600	659200	672700	214200	281900	150500	51110	25120	18800	79410

CAL YR 1977 TOTAL 915223 MEAN 2507 MAX 58700 MIN 105 CFSM 2.54 IN 34.46 AC-FT 1815000
WTR YR 1978 TOTAL 1733088 MEAN 4748 MAX 58700 MIN 248 CFSM 4.81 IN 65.25 AC-FT 3438000

NOTE.--No gage-height record Dec. 22 to Jan. 23, Jan. 30 to Feb. 6.

14400000 CHETCO RIVER NEAR BROOKINGS, OR

LOCATION.—Lat 42°07'25", long 124°11'10", in SE¼ sec.12, T.40 S., R.13 W., Curry County, Hydrologic Unit 17100312, on right bank 16 ft (5 m) upstream from bridge, 0.5 mi (0.8 km) upstream from Elk Creek, 6.8 mi (10.9 km) northeast of Brookings, and at mile 10.7 (17.2 km).

DRAINAGE AREA.—271 mi^2 (702 km^2).

PERIOD OF RECORD.—October 1969 to current year.

GAGE.—Water-stage recorder. Altitude of gage is 50 ft (15 m), from topographic map.

REMARKS.—Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.—9 years, 2,300 ft^3/s (65.14 m^3/s), 115.25 in/yr (2,927 mm/yr), 1,666,000 acre-ft/yr (2.05 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 65,800 ft^3/s (1,860 m^3/s) Jan. 16, 1971, gage height, 27.45 ft (8.367 m); minimum, 45 ft^3/s (1.27 m^3/s) Oct. 21-23, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 22, 1964, reached a stage of 32.25 ft (9.830 m), from high-water mark on bridge pier, discharge, 85,400 ft^3/s (2,420 m^3/s), from rating curve extended above 45,000 ft^3/s (1,270 m^3/s).

EXTREMES FOR CURRENT YEAR.—Peak discharges above base of 20,000 ft^3/s (566 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 25	2400	33,900	960	18.08	5.511	Feb. 3	0600	32,000	906	17.53	5.343
Dec. 14	1930	*46,100	1,310	*21.53	6.562						

Minimum, 112 ft^3/s (3.17 m^3/s) Aug. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	843	2260	4550	3950	2380	1540	980	1960	794	284	138	167
2	639	2670	4220	3540	10400	1420	1480	1770	743	284	135	159
3	520	2290	6050	6850	28000	1550	1950	1630	694	296	133	159
4	446	2680	5590	8310	13900	1630	2600	1450	655	280	131	280
5	395	7050	4870	13100	8360	1970	5130	1280	618	260	131	686
6	459	5350	5020	14700	7120	2140	4550	1170	582	249	128	759
7	464	3560	5330	9180	11200	2280	3280	1060	549	238	126	718
8	399	2690	4840	7270	10400	4440	2660	1000	529	234	122	1230
9	359	2170	4340	7270	8170	3720	2360	941	517	227	120	7140
10	328	1780	3900	5820	5820	2920	2280	874	536	217	116	9940
11	303	1630	7250	4680	4460	2450	2170	921	504	214	116	5330
12	276	1490	8270	4760	3790	2140	1840	829	486	210	118	3370
13	260	1920	30100	4430	3370	1890	1620	751	582	207	124	2580
14	247	1900	39000	5120	3140	1650	2030	1580	498	201	124	2030
15	238	2090	26400	6560	3340	1460	2850	5170	457	201	122	1630
16	224	2250	16800	16100	3060	1290	2770	4550	434	207	120	1310
17	218	1920	15100	13500	3090	1160	3250	3150	412	197	118	1100
18	209	1660	9460	9420	3420	1050	4120	2560	396	188	118	1010
19	201	1480	6450	9800	3240	960	5840	2180	386	179	116	847
20	193	1320	4840	9260	2870	893	6470	1880	375	176	116	734
21	190	9540	3810	7510	2540	829	5350	1650	360	173	128	663
22	185	20000	3420	6830	2240	776	6190	1460	351	164	143	596
23	328	14500	9260	5180	1980	1380	7650	1310	341	161	143	549
24	1020	25100	10500	4090	1850	3140	5420	1450	356	159	856	504
25	3310	21700	6400	3280	1950	2310	4380	1420	351	153	1610	462
26	2390	21800	4490	2700	2090	1810	3630	1290	327	148	492	440
27	1550	11100	4250	2300	1880	1530	3000	1190	313	151	300	434
28	1260	7650	4220	1970	1700	1300	2650	1090	296	148	234	396
29	2350	6090	4690	1720	---	1160	2390	1000	292	145	204	370
30	5190	5200	6750	1500	---	1060	2220	912	292	145	185	346
31	3000	---	5330	1360	---	960	---	847	---	143	176	---
TOTAL	27994	192840	275500	202060	155760	54808	103110	50345	14026	6239	6943	45939
MEAN	903	6428	8887	6518	5563	1766	3437	1624	468	201	224	1531
MAX	5190	25100	39000	16100	28000	4440	7650	5170	794	296	1610	9940
MIN	185	1320	3420	1360	1700	776	980	751	292	143	116	159
CFSM	3.33	23.7	32.8	24.1	20.5	6.52	12.7	5.99	1.73	.74	.83	5.65
IN.	3.84	26.47	37.82	27.74	21.38	7.52	14.15	6.91	1.93	.86	.95	6.31
AC-FT	55530	382500	546500	400800	308900	108700	204500	99860	27820	12380	13770	91120

CAL YR 1977 TOTAL 683791 MEAN 1873 MAX 39000 MIN 67 CFSM 6.91 IN 93.86 AC-FT 1356000
WTR YR 1978 TOTAL 1135564 MEAN 3111 MAX 39000 MIN 116 CFSM 11.5 IN 155.88 AC-FT 2252000

Discharge at ungaged sites

Monthly records for the following sites have been computed by routing methods described in USGS Circular 550. Circular 550 contains monthly records for these sites for water years 1928-65, including monthly flows adjusted for major upstream storage. Figures given here represent unadjusted flows, and are rated fair. Adjusted records are available from Northwest Water Resources Data Center, Portland, Oregon.

14144700 COLUMBIA RIVER AT VANCOUVER, WA.—Lat 45°37'15", long 122°40'20", in NE¼NW¼ sec.34, T.2 N., R.1 E., Clark County, Hydrologic Unit 17080001, 5.0 mi (8.0 km) upstream from Willamette River, and at mile 106.5 (171.4 km). Drainage area, 241,000 mi^2 (624,200 km^2), approximately. Records available, monthly discharge October 1927 to current year. Daily discharge for October 1963 to September 1969, published in annual data reports for Oregon, 1965-67, 1969.

14222870 COLUMBIA RIVER AT SAINT HELENS, OR.—Lat 45°51'58", long 122°47'00", Columbia County, Hydrologic Unit 17080003, center of channel at intersection of Township (4/5N) line and Oregon-Washington boundary, 0.6 mi (1.0 km) east of Saint Helens and at mile 86.0 (138.3 km). Drainage area, 253,900 mi^2 (657,600 km^2), approximately. Records available, monthly discharge October 1927 to current year.

14245300 COLUMBIA RIVER AT LONGVIEW, WA.—Lat 46°06'22", long 122°57'14", Cowlitz County, Hydrologic Unit 17080003, at Longview Bridge, 1.0 mi (1.6 km) south of Longview, 2.0 mi (3.2 km) downstream from Cowlitz River, and at mile 66.0 (106.2 km). Drainage area, 256,700 mi^2 (664,900 km^2), approximately. Records available, monthly discharge October 1927 to current year.

14280000 COLUMBIA RIVER AT MOUTH, NEAR ASTORIA, OR.—Lat 46°15', long 124°05', Clatsop County, Hydrologic Unit 17080006, center of channel at river mouth, due north from original end of south jetty, 12.3 mi (19.8 km) northwest of Astoria, and at mile 0. Drainage area, 258,000 mi^2 (668,200 km^2), approximately. Records available, monthly discharge October 1927 to current year.

MONTHLY AND ANNUAL MEAN DISCHARGE IN CUBIC FEET PER SECOND

WATER YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
14144700 COLUMBIA RIVER AT VANCOUVER, WA													
1978	100,400	138,600	199,300	178,500	182,400	134,000	244,600	273,000	245,100	186,400	126,400	144,800	183,600
14222870 COLUMBIA RIVER AT SAINT HELENS, OR													
1978	119,500	206,400	352,800	259,200	233,900	206,300	269,900	302,100	260,000	196,000	137,100	165,800	225,700
14245300 COLUMBIA RIVER AT LONGVIEW, WA													
1978	124,700	229,500	399,900	276,500	246,600	213,900	278,600	309,500	266,700	200,500	140,800	171,300	238,200
14280000 COLUMBIA RIVER AT MOUTH, NEAR ASTORIA, OR													
1978	128,900	244,400	428,000	285,300	256,300	215,300	286,000	317,000	270,100	205,400	141,000	176,900	246,100

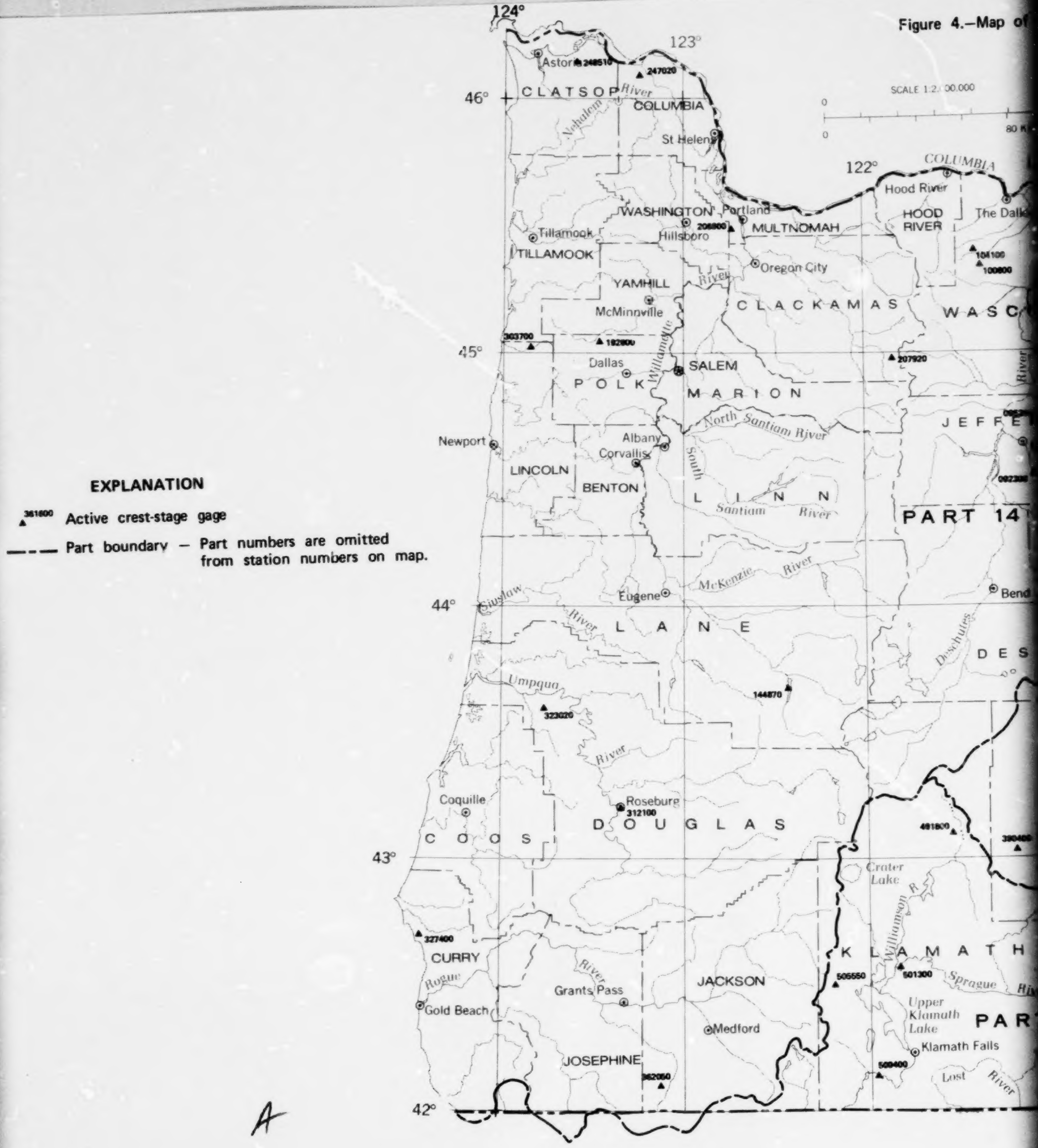


Figure 4.—Map of

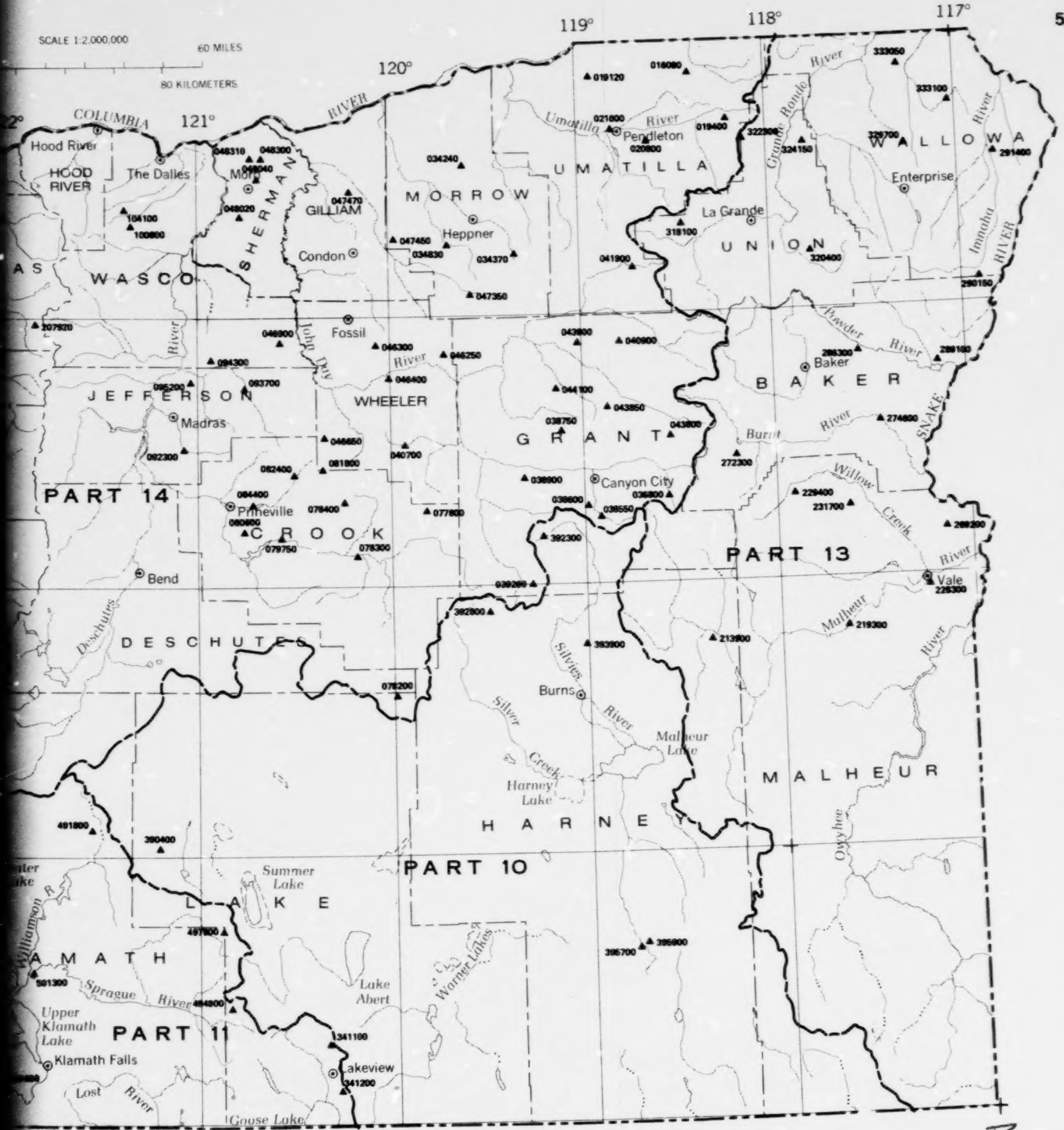
EXPLANATION

▲361600 Active crest-stage gage

— — — Part boundary – Part numbers are omitted from station numbers on map.

A

Figure 4.—Map of Oregon showing locations of partial-record stations.



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Crest-stage partial-record stations

The following table contains annual maximum discharge for crest-stage stations. A crest-stage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft³/s)
		SILVER LAKE BASIN					
10390400	BRIDGE CREEK NEAR THOMPSON RESERVOIR, OR	Lat 43°01'30", long 121°12'00" in S½ sec.29, T.29 S., R.13 E., Lake County, in Fremont National Forest, at culvert on Forest Service road 2800, 7.2 miles northwest of Thompson Reservoir, and 11 miles southwest of town of Silver Lake.	10.6	1965-78	4- 6-78	9.58	44
		MALHEUR AND HARNEY LAKES BASIN					
10392300	SILVIES RIVER NEAR SENECA, OR	Lat 44°10'30", long 119°12'50", in NW¼NW¼ sec.23, T.16 S., R.29 E., Grant County, in Malheur National Forest, at culvert on Forest Service road 1611, 100 feet downstream from Wickiup Creek, and 12 miles northwest of Seneca.	18.4	1967-78	4- 1-78	12.39	81
10392800	CROWSFOOT CREEK NEAR BURNS, OR	Lat 43°53'55", long 119°29'50", in NE¼ sec.29, T.19 S., R.27 E., Harney County, in Ochoco National Forest, at culvert on Forest Service road 1939, 1 mile upstream from mouth, and 31 miles northwest of Burns.	8.50	1966-78	4- 1-78	9.46	68
10393900	DEVINE CANYON NEAR BURNS, OR	Lat 43°46'20", long 119°00'05", in NE¼ sec.9, T.21 S., R.31 E., Harney County, at culvert at U.S. Highway 395, at junction with road to Baker Corral, 0.7 mile north of Ochoco National Forest boundary, and 15 miles north of Burns.	4.96	1965-78	4- 1-78	12.64	10
10395700	DONNER UND BLITZEN RIVER TRIBUTARY BELOW INDIAN CREEK, NEAR FRENCHGLEN, OR (Station discontinued)	Lat 42°38'14", long 118°46'10", in NW¼SW¼ sec.7, T.34 S., R.32 E., Harney County, at culvert on south leg of BLM Steens Mountain Loop Road, 0.3 mi (0.48 km) upstream from mouth, 0.4 mi 0.64 km) west of Indian Creek campground, and 15 mi (24.1 km) southeast of Frenchglen.	.98	1977-78	4-26-78	14.20	26
10395800	DONNER UND BLITZEN RIVER TRIBUTARY NEAR FRENCHGLEN, OR (Station discontinued)	Lat 42°39'33", long 118°50'00", in NE¼NE¼ sec.4, T.34 S., R.32½ E., Harney County, at culvert on BLM Steens Mountain Road, 12 mi (19.3 km) south of Frenchglen.	4.81	1975-78	4-26-78	-	335
10395900	LITTLE BLITZEN RIVER TRIBUTARY NEAR FRENCHGLEN, OR (Station discontinued)	Lat 42°39'22", long 118°43'46", in SE¼NW¼ sec.4, T.34 S., R.32 E., Harney County, at culvert on south leg of BLM Steens Mountain Loop Road, 15 mi (24.1 km) southeast of Frenchglen.	1.86	1977-78	4-26-78	14.89	43
10396400	MUD CREEK TRIBUTARY NEAR FRENCHGLEN, OR (Station discontinued)	Lat 42°46'56", long 118°46'17", in NW¼SW¼ sec.19, T.32 S., R.32 3/4 E., Harney County, at culvert on BLM Steens Mountain Road, 9 mi (14.5 km) east of Frenchglen.	.53	1975-78	4-26-78	11.54	9.4
10406100	KUENY CANYON NEAR FRENCHGLEN, OR (Station discontinued)	Lat 42°41'45", long 118°57'28", in NW¼SE¼ sec.21, T.33 S., R.32 E., Harney County, at culvert on BLM Steens Mountain Road, 10 mi (16.1 km) south of Frenchglen.	9.76	1975-78	4-26-78	-	660
		CATLOW VALLEY BASIN					
10406350	PEARL WISE CANYON NEAR FIELDS, OR (Station discontinued)	Lat 42°20'33", long 118°48'26", in NW¼SE¼ sec.12 T.37 S., R.32 3/4 E., Harney County, at culvert on Highway 205, 7 mi (11.3 km) northwest of Fields.	5.05	1975-78	4-26-78	2.91	15.0
		PUEBLO VALLEY BASIN					
10406490	FIELDS CREEK TRIBUTARY NEAR FIELDS, OR (Station discontinued)	Lat 42°16'48", long 118°40'06", in SE¼SE¼ sec.31, T.37 S., R.33 E., Harney County, at culvert on Highway 205 (Pueblo Valley Road), 1.1 mi (1.8 km) north of Fields.	8.85	1976-78	4-26-78	10.07	3.7

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Annual maximum discharge at crest-stage partial-record stations--Continued

					Annual maximum		
Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Gage height (ft)	Discharge (ft^3/s)
		GOOSE LAKE BASIN					
11341100	SALT CREEK NEAR LAKEVIEW, OR	Lat 42°17'35", long 120°20'45", in NW¼ sec.10, T.38 S., R.20 E., Lake County, at culvert on U.S. Highway 395, 1.7 miles upstream from mouth 2.6 miles north of Warner Valley Junction, and 7.6 miles north of Lakeview.	5.62	1964-78	4- 6-78	14.32	33
11341200	CRANE CREEK NEAR LAKEVIEW, OR	Lat 42°07'05", long 120°17'25", in NW¼ sec.7, T.40 S., R.21 E., Lake County, in Fremont National Forest, at culvert on Crane Creek road, 1.5 miles east of crossing at U S. Highway 395, and 6 miles southeast of Lakeview.	11.4	1966-78	4-16-78	13.52	115
		KLAMATH RIVER BASIN					
11491800	MOSQUITO CREEK NEAR SHEVLIN, OR	Lat 43°05'40", long 121°32'50", in SE¼SE¼ sec.32, T.28 S., R.10 E., Klamath County, in Winema National Forest, at culvert on Forest Service road 283A, 150 ft south of intersection with road 283, 2 miles southwest of Jacks Corral, and 8 miles southeast of Shevlin.	2.63	1965-78	4- 6-78	7.24	4.5
11494800	BROWNSWORTH CREEK NEAR BLY, OR	Lat 42°25'40", long 120°50'20", in NW¼NW¼ sec.28, T.36 S., R.16 E., Lake County, at culvert on Forest Service road 3610, in Fremont National Forest, 2 miles upstream from Hammond Creek, and about 12 miles east of Bly.	2.20	1965-78	4- 6-78	11.56	32
11497800	CURRIER CREEK NEAR PAISLEY, OR	Lat 42°42'55", long 120°52'50", in NW¼NW¼ sec.18, T.33 S., R.16 E., Lake County, in Fremont National Forest, at culvert on Forest Service road 337, 100 ft east of junction with road 3313, 1.4 miles upstream from mouth, and 17 miles west of Paisley.	2.46	1965-78	4- 6-78	11.76	4.5
11501300	CRYSTAL CREEK NEAR CHILOQUIN, OR	Lat 42°33'45", long 121°50'20", in SE¼ sec.2, T.35 S., R.7 E., Klamath County, in Winema National Forest, at culvert on Chiloquin Ridge road, 200 ft upstream from mouth, and 1.5 miles southeast of Chiloquin.	5.77	1965-78	3-15-78	13.76	30
11505550	LOST CREEK NEAR ROCKY POINT, OR	Lat 42°29'35", long 122°11'30", in SE¼ sec.26, T.35 S., R.5 E., Klamath County, in Winema National Forest, at culvert on Forest Service road 3561, 1.5 miles east of Long Lake, and 5.5 miles west of Rocky Point.	13.2	1966-78	4- 6-78	8.83	32
11509400	KLAMATH RIVER TRIBUTARY NEAR KENO, OR	Lat 42°07'50", long 121°57'50", in SW¼ sec.35, T.39 S., R.7 E., Klamath County, at culvert on State Highway 66, 0.3 mile upstream from mouth, 1.8 miles west of Keno, and 4.0 miles east of Klamath River bridge.	1.02	1964-78	4- 6-78	11.39	1.3
		SNAKE RIVER BASIN					
13172930	SPRING CREEK TRIBUTARY NEAR ROCKVILLE, OR	Lat 43°13'22", long 117°08'43", in SW¼ sec.7, T.27 S., R.46 E., Malheur County, at culvert on BLM access road, 6 miles west of State line, and 5 miles south of Rockville.	.76	1972-78	4-27-78	10.47	13
		OWYHEE RIVER BASIN					
13182100	DAGO GULCH NEAR ROCKVILLE, OR	Lat 43°17'37", long 117°15'14", in SW¼SE¼ sec.18, T.26 S., R.45 E., Malheur County, at culvert on Bureau of Land Management Lesle Gulch Road, 0.2 mile west of Runaway Creek, and 8 miles west of Rockville.	3.09	1970-78	4-27-78	12.65	32
13182150	LONG GULCH NEAR ROCKVILLE, OR	Lat 43°19'17", long 117°11'42", in NW¼NE¼ sec.10, T.26 S., R.45 E., Malheur County, at culvert on Bureau of Land Management Lesle Gulch Road, 1.3 miles upstream from Bannock Gulch, and 4 miles west of Rockville.	1.38	1970-78	4-27-78	9.88	11
		MALHEUR RIVER BASIN					
13213900	MALHEUR RIVER TRIBUTARY NEAR DREWSEY OR	Lat 43°46'56", long 118°21'30", in S½ sec.36, T.20 S., R.35 E., Harney County, at culvert on county road to Drewsey, 200 feet north of U.S. Highway 20, and 2 miles south of Drewsey.	2.28	1964-78	4-26-78	8.14	7.6
13219300	MALHEUR RIVER TRIBUTARY NEAR HARPER, OR	Lat 43°48'51", long 117°39'13", in SE¼ sec.23, T.20 S., R.41 E., Malheur County, at culvert on U.S. Highway 20, 4 miles southwest of Harper.	.10	1968-78	7- 4-78	11.77	100

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft³/s)
		MALHEUR RIVER BASIN--Continued					
13228300	LYTLE CREEK NEAR VALE, OR	Lat 43°57'26", long 117°13'33", in SE¼ sec.32, T.18 S., R.45 E., Malheur County, at culvert on Lytle Boulevard, 2 miles south of Vale.	6.46	1968-78	7- 3-78	9.61	25
13229400	LOST VALLEY CREEK TRIBUTARY NEAR IRONSIDE, OR	Lat 44°18'50", long 117°54'10", in SW¼ sec.26, T.14 S., R.39 E., Malheur County, at culvert on U.S. Highway 26, 2.2 miles east of Ironside.	1.86	1966-78	3- 5-78	7.24	14
		MOORES HOLLOW BASIN					
13269200	MOORES HOLLOW TRIBUTARY NEAR WEISER, ID	Lat 44°10'10", long 117°07'30", in SE¼SE¼ sec.18, T.16 S., R.46 E., Malheur County, at culvert on Interstate Highway 80N, 7.0 miles southeast of junction with U.S. Highway 30, and 8.0 miles southwest of Weiser.	.90	1964-78	1-17-78	11.68	8.1
		BURNT RIVER BASIN					
13272300	JOB CREEK TRIBUTARY NEAR UNITY, OR	Lat 44°27'50", long 118°12'00", in S½ sec.5, T.13 S., R.37 E., Baker County, on State Highway 7, 100 feet north of U.S. Highway 26 junction, and 2 miles north of Unity.	-	1966-78	4-16-78	11.32	2.7
13274600	BURNT RIVER TRIBUTARY AT DURKEE, OR	Lat 44°32'25", long 117°24'55", in SE¼ sec.28, T.11 S., R.43 E., Baker County, at culvert on Interstate Highway 80N, 0.6 mile upstream from mouth, and 0.8 mile southeast of Durkee.	1.80	1966-78	7- 2-78	8.30	59
		POWDER RIVER BASIN					
13286300	WATERSPOUT CREEK NEAR BAKER, OR	Lat 44°50'10", long 117°33'45", in SE¼ sec.28, T.8 S., R.42 E., Baker County, at culvert on State Highway 86, 14 miles east of Baker.	.96	1968-78	12-15-77	12.67	9.9
13289100	IMMIGRANT GULCH NEAR RICHLAND, OR	Lat 44°47'10", long 117°08'05", in NW¼ sec.18, T.9 S., R.46 E., Baker County, at culvert on State Highway 86, 1.9 miles northeast of Richland, and 2.0 miles above maximum flow line of Brownlee Reservoir.	6.64	1964-78	12-15-77	8.73	177
		PINE CREEK BASIN					
13290150	NORTH PINE CREEK NEAR HOMESTEAD, OR	Lat 45°05'25", long 116°53'45", in NW¼ sec.31, T.5 S., R.48 E., Baker County, at culvert on Forest Service road S51, 300 ft upstream from Doe Creek, and 5 miles northwest of Homestead.	2.89	1965-78	4-27-78	11.11	73
		IMNAHA RIVER BASIN					
13291400	DEER CREEK NEAR IMNAHA, OR	Lat 45°33'00", long 116°47'30", in SW¼ sec.23, T.1 N., R.48 E., Wallowa County, in Wallowa-Whitman National Forest, at culvert on Forest Service road N206, 2 miles southeast of Imnaha.	1.73	1965-78	4-28-78	16.05	14
		GRANDE RONDE RIVER BASIN					
13318100	MCINTYRE CREEK NEAR STARKEY, OR	Lat 45°19'40", long 118°26'55", in SE¼SE¼ sec.5, T.3 S., R.35 E., Union County, in Wallowa-Whitman National Forest, at culvert on Forest Service road S217, 1.8 miles south of Union County line, and 7 miles north of Starkey.	1.80	1966-78	7- 2-78	13.90	10
13320400	LITTLE CREEK AT HIGH VALLEY, NEAR UNION, OR	Lat 45°12'45", long 117°46'30", in SW¼SE¼ sec.14, T.4 S., R.40 E., Union County, at county road bridge, 4 miles east of Union.	15.8	1948, 1952-78	7- 2-78	10.58	93
13322300	DRY CREEK NEAR BINGHAM SPRINGS, OR	Lat 45°38'10", long 118°06'55", in NE¼SE¼ sec.24, T.2 N., R.37 E., Umatilla County, in Umatilla National Forest, at culvert on Forest Service road N32 (Ruckel Road), at Umatilla County line, 9 miles southeast of Bingham Springs.	1.37	1956-78	12-14-77	30.59	51
13324150	RYSDAM CANYON TRIBUTARY NEAR MINAM, OR	Lat 45°36'55", long 117°47'45", in NE¼ sec.34, T.2 N., R.40 E., Union County, at culvert on county road, 0.2 mile upstream from mouth, 3.5 miles west of Minam.	.99	1967-78	12-14-77	23.59	22

Annual maximum discharge at crest-stage partial-record stations—Continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft³/s)
		GRANDE RONDE RIVER BASIN—Continued					
13329700	TROUT CREEK TRIBUTARY NEAR CHICO, OR	Lat 45°35'50", long 117°15'35", in center of sec.1, T.1 N., R.44 E., Wallowa County at culvert on State Highway 3, 0.2 mile upstream from mouth, 1.0 mile south of Wallowa-Whitman National Forest boundary and 9.5 miles southwest of Chico.	.26	1967-78	4-28-78	9.88	15
13333050	BUFORD CREEK NEAR FLORA, OR	Lat 45°53'25", long 117°17'00", on sec. line 23 and 26, T.5 N., R.44 E., Wallowa County, at two culverts on county road, 1.0 mile west of junction with State Highway 3, 1.5 miles southeast of Flora.	.47	1967-78	4-28-78	9.72	36
13333100	DOE CREEK NEAR IMNAHA, OR	Lat 45°44'50", long 117°01'20", in NE¼ sec.14, T.3 N., R.46 E., Wallowa County, in Wallowa-Whitman National Forest, at culvert on Forest Service road N431, 0.1 mile north of Vigne Forest Camp, and 16 miles northwest of Imnaha.	5.49	1965-78	4-28-78	6.54	51
		WALLA WALLA RIVER BASIN					
14016080	DRY CREEK TRIBUTARY NEAR MILTON-FREEWATER, OR	Lat 45°53'05", long 118°23'28", in NE¼ sec.26, T.5 N., R.35 E., Umatilla County, at culvert on State Highway 11, 2.6 miles south of Milton-Freewater.	1.22	1967-78	12-15-77	18.36	14
		COLD SPRINGS CANYON BASIN					
14019120	NORTH FORK COLD SPRINGS CANYON TRIBUTARY AT HOLDMAN, OR	Lat 45°52'40", long 118°55'10", in N½ sec.34, T.5 N., R.31 E., Umatilla County, at culvert on county road, at mouth, and 0.6 mile east of Holdman.	2.86	1967-78	8-22-78	-	820
		UMATILLA RIVER BASIN					
14019400	ELBOW CREEK NEAR BINGHAM SPRINGS, OR	Lat 45°42'45", long 118°11'54", in NE¼ sec.28, T.3 N., R.37 E., Umatilla County, in Umatilla National Forest, at culvert on Forest Service road N32, 200 ft upstream from mouth, and 2.6 miles southeast of Bingham Springs.	.68	1965-78	4- 1-78	12.20	60
14020800	MISSION CREEK AT ST. ANDREWS MISSION, OR	Lat 45°38'05", long 118°37'18", in SE¼ sec.24, T.2 N., R.33 E., Umatilla County, at culvert on county road, 0.1 mile east of St. Andrews School, and 8 miles east of Pendleton.	4.45	1958, 1963-78	2- 6-78	15.33	35
14021600	NELSON CREEK AT PENDLETON, OR	Lat 45°40'56", long 118°48'24", on line between sec.3 and 4, T.2 N., R.32 E., Umatilla County, at culvert on U.S. Highway 395, 0.7 mile upstream from mouth, and 0.5 mile northwest of Pendleton.	2.56	1958-78	8-22-78	20.40	290
		JUNIPER CANYON BASIN					
14034240	LITTLE JUNIPER CANYON NEAR PINE CITY, OR	Lat 45°33'32", loug 119°36'00", in NE¼NW¼ sec.19, T.1 N., R.26 E., Morrow County, at culvert on county road, 8.0 miles west of Pino City.	4.87	1968-78	1-10-78	13.42	68
		WILLOW CREEK BASIN					
14034370	WILLOW CREEK TRIBUTARY NEAR HEPPNER, OR	Lat 45°13'40", long 119°20'00", in SW¼ sec.9, T.4 S., R.28 E., Morrow County, at culvert on Willow Creek Road, 300 ft above mouth, and 16.1 miles southeast of Heppner.	1.11	1958-78	5-15-78	12.32	8.2
14034830	CASON CANYON AT RUGGS, OR	Lat 45°15'50", long 119°41'05", in SW¼NE¼ sec.34, T.3 S., R.25 E., Morrow County, at culvert on Rhea Creek road, at junction with State Highway 207, at Ruggs.	2.21	1968-78	1-10-78	6.88	69
		JOHN DAY RIVER BASIN					
14036800	JOHN DAY RIVER NEAR PRAIRIE CITY, OR	Lat 44°19'10", long 118°33'25", in SE¼SW¼ sec.30, T.14 S., R.35 E., Grant County at culvert on Forest Service road 1427, in Malheur National Forest, 200 ft downstream from Call Creek, and 12 miles southeast of Prairie City.	17.4	1968-78	4-26-78	7.62	21
14038550	EAST FORK CANYON CREEK NEAR CANYON CITY, OR	Lat 44°14'45", long 118°54'40", in NE¼ sec.30, T.15 S., R.32 E., Grant County, in Malheur National Forest, at culvert on Forest Service road 1451, at mouth, and 10 miles south of Canyon City.	24.8	1965-78	4- 1-78	11.42	116

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		JOHN DAY RIVER BASIN--Continued					
14038600	VANCE CREEK NEAR CANYON CITY, OR	Lat 44°17'20", long 118°58'50", in NE¼ sec.10, T.15 S., R.31 E., Grant County, at culvert on U.S. Highway 395, at confluence with South Fork, 1.0 mile upstream from mouth, and 9.5 miles south of Canyon City.	6.54	1964-78	4- 2-78	11.53	11
14038750	BEECH CREEK NEAR FOX, OR	Lat 44°34'05", long 119°06'30", in SE¼ sec.33, T.11 S., R.30 E., Grant County, at culvert on U.S. Highway 395, at entrance to Beech Creek Forest Camp, and 6.8 miles south of Fox.	1.94	1965-78	4- 1-78	12.13	13
14038900	FIELDS CREEK NEAR MOUNT VERNON, OR	Lat 44°23'35", long 119°18'25", in SE¼ sec.35, T.13 S., R.28 E., Grant County, in Malheur National Forest, at culvert on Forest Service road 1451, 0.3 mile upstream from Big Canyon and 10 miles west of Mt. Vernon.	17.5	1965-78	12-15-77	10.50	110
14039200	VENATOR CREEK NEAR SILVIES, OR	Lat 43°59'55", long 119°16'30", in NW¼ sec.20, T.18 S., R.29 E., Grant County, in Malheur National Forest, at culvert on Forest Service road 1877, 1.5 miles above mouth, and 16 miles west of Silvies.	11.9	1966-78	4- 1-78	11.64	55
14040700	WHISKY CREEK NEAR MITCHELL, OR	Lat 44°31'21", long 119°55'18", in SE¼ sec.14, T.12 S., R.23 E., Wheeler County, at culvert on U.S. Highway 26, 13.6 miles east of Mitchell.	2.22	1968-78	4-26-78	9.73	12
14040900	BRUIN CREEK NEAR DALE, OR	Lat 44°53'51", long 118°47'35", in SW¼ sec.6, T.8 S., R.33 E., Grant County, at culvert on Forest Service road SA-12, 12 miles southeast of Dale.	4.63	1969-78	7- 2-78	11.88	36
14041900	LINE CREEK NEAR LEHMAN SPRINGS, OR	Lat 45°10'10", long 118°42'40", in NW¼ sec.3, T.5 S., R.33 E., Umatilla County, in Umatilla National Forest, at culvert on Forest Service road 524, 0.2 mile upstream from mouth, and 2 miles west of Lehman Springs.	2.27	1965-78	4-26-78	11.20	17
14043800	BRIDGE CREEK NEAR PRAIRIE CITY, OR	Lat 44°32'30", long 118°32'25", in NE¼ sec.7, T.12 S., R.35 E., Grant County, at culvert at intersection of Looney Springs Road and U.S. Highway 26, 3.1 miles east of Dixie Summit, and 13.4 miles east of Prairie City.	6.93	1964-78	4- 1-78	8.81	45
14043850	COTTONWOOD CREEK NEAR GALENA, OR	Lat 44°39'10", long 118°51'55", in SE¼ sec.33, T.10 S., R.32 E., Grant County, in Malheur National Forest, at culvert on Forest Service road 1015, 2.5 miles upstream from mouth, and 4 miles south of Galena.	3.89	1965-78	4- 1-78	12.63	98
14043900	GRANITE CREEK NEAR DALE, OR	Lat 44°53'40", long 119°00'50", in NW¼ sec.8, T.8 S., R.31 E., Grant County, at culvert on U.S. Highway 395, 4.7 miles north of bridge on Middle Fork John Day River, and 8.2 miles south of Dale.	1.90	1965-78	7- 2-78	13.90	17
14044100	PAUL CREEK NEAR LONG CREEK, OR	Lat 44°43'26", long 119°07'54", in SE¼ sec.5, T.10 S., R.30 E., Grant County, at culvert on State Highway 207, 1.5 miles east of long Creek.	3.50	1968-78	1-12-78	-	1.5
14046250	IVES CANYON NEAR SPRAY, OR	Lat 44°51'35", long 119°42'50", in SE¼NE¼ sec.22, T.8 S., R.25 E., Wheeler County, at culvert on State Highway 207, 4 miles south of National Forest boundary, and 4 miles northeast of Spray.	2.73	1967-78	6-30-78	14.32	86
14046300	BIG SERVICE CREEK NEAR SERVICE CREEK, OR	Lat 44°53'38", long 120°04'11", in NE¼NE¼ sec.10, T.8 S., R.22 E., Wheeler County, at culvert on State Highway 19, 7.8 miles north of Service Creek.	5.56	1968-78	3-21-78	7.14	5.3
14046400	DONNELY CREEK TRIBUTARY NEAR SERVICE CREEK, OR	Lat 44°46'20", long 120°00'10", in SE¼ sec.19, T.9 S., R.23 E., Wheeler County, at two culverts on State Highway 207, 1.8 miles south of Service Creek.	1.85	1964-78	7- 2-78	11.56	42
14046650	CARROL CREEK NEAR MITCHELL, OR (Station discontinued)	Lat 44°33'07", long 120°20'25", in SW¼ sec.4, T.12 S., R.20 E., Wheeler County, at culvert on U.S. Highway 26, 11.5 miles west of Mitchell.	.28	1968-78	-	-	0
14046900	JOHN DAY RIVER TRIBUTARY NEAR CLARNO, OR	Lat 44°54'20", long 120°34'05", in NE¼ sec.4, T.8 S., R.18 E., Wasco County, at culvert on State Highway 218, 5 miles west of Clarno, and 8 miles east of Antelope.	1.36	1959-78	4-26-78	25.64	28
14047350	ROCK CREEK NEAR HARDMAN, OR	Lat 45°04'40", long 119°34'10", in NE¼ sec.2, T.6 S., R.26 E., Morrow County, in Umatilla National Forest, at culvert on Forest Service road 618, 0.5 mile upstream from mouth, and 8.5 miles southeast of Hrrdman.	6.25	1965-78	1-10-78	12.76	65

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (ft)	Dis-charge (ft³/s)
		JOHN DAY RIVER BASIN--Continued					
14047450	WEST FORK DRY CREEK NEAR GOOSEBERRY, OR	Lat 45°17'12", long 119°57'53", in SE¼SE¼ sec.20, T.3 S., R.23 E., Morrow County, at culvert on State Highway 206, 3.5 miles west of Gooseberry, and 10 miles northeast of Condon.	.81	1965-78	1-10-78	7.54	24
14047470	JUNIPER CANYON TRIBUTARY NEAR MIKKALO, OR	Lat 45°27'51", long 120°11'54", in SW¼ sec.21, T.1 S., R.21 E., Gilliam County, at culvert on Mikkalo Road, 0.1 mile upstream from mouth, and 1.7 miles east of Mikkalo.	1.94	1972-78	6-30-78	21.12	1,540
14048020	GRASS VALLEY CANYON NEAR GRASS VALLEY, OR	Lat 45°22'25", long 120°46'27", on sec. lines 23 and 26, T.2 S., R.16 E., Sherman County, at culvert on county road, 1 mile northeast of Grass Valley.	8.15	1958-78	12-13-77	-	0
14048040	GORDON HOLLOW AT DEMOSS SPRINGS, OR	Lat 45°30'40", long 120°40'55", in NW¼ sec.3, T.1 S., R.17 E., Sherman County, at culvert on U.S. Highway 97 at DeMoss Springs.	8.86	1959-78	12-13-77	10.19	235
		SPANISH HOLLOW BASIN					
14048300	SPANISH HOLLOW AT WASCO, OR	Lat 45°35'20", long 120°41'40", in NE¼ sec.9, T.1 N., R.17 E., Sherman County, at culvert on street in southeast Wasco, 1 block east of U.S. Highway 97.	8.05	1959-78	6-10-78	4.22	88
14048310	SPANISH HOLLOW TRIBUTARY AT WASCO, OR	Lat 45°35'30", long 120°42'55", on sec. lines 5 and 8, T.1 N., R.17 E., Sherman County, on State Highway 206, 0.9 mile west of junction of Highway 97 in Wasco.	6.13	1967-78	6-10-78	7.89	177
		DESCHUTES RIVER BASIN					
14077800	WOLF CREEK TRIBUTARY NEAR PAULINA, OR	Lat 44°16'39", long 119°49'00", in NW¼NW¼ sec.14, T.15 S., R.24 E., Crook County, in Ochoco National Forest, at culvert on Forest Service road 1438, 1.7 miles south of Crook County line, 13 miles northeast of Paulina.	2.15	1965-78	4-26-78	9.13	82
14078200	LIZARD GULCH NEAR HAMPTON, OR	Lat 43°35'20", long 119°59'00", in SW¼ sec.8, T.23 S., R.23 E., Lake County, in Glass Mountain conservation area, at culvert on U.S. Highway 20, and 15.5 miles east of Hampton.	19.6	1965-78	4-26-78	8.91	25
14078300	CEMETERY CREEK NEAR PAULINA, OR	Lat 44°06'36", long 120°10'30", in SW¼ sec.11, T.17 S., R.21 E., Crook County, at culvert on State Highway 380, 13.2 miles west of Paulina.	a5.1	1968-78	-	-	0
14078400	LOOKOUT CREEK NEAR POST, OR	Lat 44°18'40", long 120°14'24", in SW¼ sec.32, T.14 S., R.21 E., Crook County, in Ochoco National Forest, at culvert on Forest Service Road 143, and 16 miles northeast of Post.	7.53	1966-78	6-24-78	7.84	54
14079750	CROOKED RIVER TRIBUTARY NEAR POST, OR	Lat 44°10'42", long 120°34'06", in SE¼ sec.16, T.16 S., R.18 E., Crook County, at culvert on county road, 5.4 miles west of Post.	a.3	1968-78	-	-	0
14081800	AHALT CREEK NEAR MITCHELL, OR	Lat 44°26'00", long 120°21'05", in NE¼ sec.20, T.13 S., R.20 E., Crook County, at culvert on Forest Service road 1222, 200 ft upstream from mouth.	2.28	1956-78	4-26-78	7.54	32
14082400	WILDCAT CREEK NEAR PRINEVILLE, OR	Lat 44°24'47", long 120°30'00", in NW¼ sec.30, T.13 S., R.19 E., Crook County, at culvert on U.S. Highway 26, 18.5 miles northeast of Prineville.	3.66	1968-78	4-26-78	9.97	3.0
14084400	OCHOCO RESERVOIR TRIBUTARY NEAR PRINEVILLE, OR	Lat 44°18'09", long 120°43'00", in NW¼ sec.5, T.15 S., R.17 E., Crook County, at culvert on U.S. Highway 26, 6 miles east of Prineville.	.63	1968-78	-	-	0
14092300	WILLOW CREEK TRIBUTARY NEAR CULVER, OR	Lat 44°30'38", long 121°04'15", in SE¼ sec.20, T.12 S., R.14 E., Jefferson County, in Crooked River National Grasslands, at culvert on U.S. Highway 26, 0.4 mile upstream from mouth, and 7 miles east of Culver.	7.47	1965-78	4-26-78	9.25	3.9
14093700	WOODS HOLLOW AT ASHWOOD, OR	Lat 44°44'10", long 120°45'10", in SW¼ sec.36, T.9 S., R.16 E., Jefferson County, at culvert on county road, 0.1 mile upstream from mouth, and 0.3 mile north of Ashwood.	1.42	1959-78	7- 1-78	5.60	14

Annual maximum discharge at crest-stage partial-record stations—Continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft³/s)
		DESCHUTES RIVER BASIN--Continued					
14094300	COW CANYON CREEK NEAR ANTELOPE, OR	Lat 44°50'35", long 120°55'40", in NW¼SW¼ sec.27, T.8 S., R.15 E., Jefferson County, at culvert on U.S. Highway 97, 2.6 miles north of Willowdale, and 11 miles southwest of Antelope.	2.71	1959-78	4-26-78	25.85	11
14095200	SAGEBRUSH CREEK TRIBUTARY NEAR GATEWAY, OR	Lat 44°45'33", long 121°02'02", in SE¼NE¼ sec.27, T.9 S., R.14 E., Jefferson County, at culvert on former U.S. HIghway 97, 1 mile upstream from mouth and 11 miles north of Madras.	a7.4	1957-78	-	-	0
14100800	JORDAN CREEK NEAR TYGH VALLEY, OR	Lat 45°20'27", long 121°20'45", in SW¼NE¼ sec.6, T.3 S., R.12 E., Wasco County, in Mt. Hood National Forest, at culvert on Forest Service road S207, 10.5 miles northwest of Tygh Valley.	9.01	1965-78	12-13-77	16.55	480
		FIFTEENMILE CREEK BASIN					
14104100	RAMSEY CREEK NEAR DUFUR, OR	Lat 45°24'03", long 121°22'27", in NW¼ sec.13, T.2 S., R.11 E., Wasco County, in Mt. Hood National Forest, at culvert on Forest Service road S207, 12 miles west of Dufur.	3.87	1965-78	12-13-77	11.02	31
		SANDY RIVER BASIN					
14138950	DEER CREEK NEAR BULL RUN, OR	Lat 45°29'31", long 122°03'27", in SE¼SW¼ sec.10, T.1 S., R.6 E., Multnomah County, at culvert on Forest Service road S10, 300 ft upstream from Bull Run Reservoir Number One, and 9.6 mi northeast of Bull Run.	1.62	1978	12- 2-77	2.85	430
14138960	COUGAR CREEK NEAR BULL RUN, OR	Lat 45°29'28", long 122°03'40", in SW¼SW¼ sec.10, T.1 S., R.6 E., Multnomah County, at culvert on Forest Service road S10, 300 ft upstream from Bull Run Reservoir Number One, and 9.4 mi northeast of Bull Run.	3.06	1978	12- 2-77	5.04	789
14138990	BEAR CREEK NEAR BULL RUN, OR	Lat 45°29'18", long 122°04'58", in NW¼NW¼ sec.16, T.1 S., R.6 E., Multnomah County, at culvert on Forest Service road S10, 400 ft upstream from Bull Run Reservoir Number One, and 8.3 mi northeast of Bull Run.	1.68	1978	12- 2-77	3.60	269
14139510	FIVEMILE CREEK NEAR BULL RUN, OR	Lat 45°28'57", long 122°05'25", in SW¼NE¼ sec.17, T.1 S., R.6 E., Multnomah County, at culvert on Forest Service road S10, 800 ft upstream from Bull Run Reservoir Number Two, and 7.9 mi northeast of Bull Run.	.79	1978	12- 2-77	3.05	92.7
14139600	CAMP CREEK NEAR BULL RUN, OR	Lat 45°27'41", long 122°06'13", in SW¼SW¼ sec.20, T.1 S., R.6 E., Multnomah County, 15 ft downstream from falls at confluence with West Branch of Camp Creek, 0.3 mi upstream from Bull Run Reservoir Number Two, and 6.6 mi northeast of Bull Run.	3.27	1978	12-13-77	3.90	439
		WILLAMETTE RIVER BASIN					
14144870	MIDDLE FORK WILLAMETTE RIVER TRIBUTARY NEAR OAKRIDGE, OR	Lat 43°40'20", long 122°26'00", in SW¼ sec.10, T.22 S., R.3 E., Lane County, at culvert on Rigdon Road, 400 ft upstream from flow line of Hills Creek Reservoir, and 5.0 miles south of Oakridge.	.50	1960-78	12-14-77	15.61	21
14192800	SOUTH YAMHILL RIVER TRIBUTARY NEAR WILLAMINA, OR	Lat 45°02'38", long 123°28'20", in SW¼ sec.18, T.6 S., R.6 W., Polk County, at culvert on State Highway 22, 2.2 miles upstream from mouth, and 3 miles southeast of Willamina.	1.81	1954-78	12-13-77	9.68	100
14207920	POOP CREEK NEAR BIG BOTTOM, OR	Lat 44°58'35", long 121°50'35", in SW¼ sec.9 (unsurveyed), T.7 S., R.8 E., Clackamas County, in Mt. Hood National Forest, at mouth, and 3 miles southeast of Big Bottom.	1.74	1966-78	12-13-77	12.01	15

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum Date	Annual maximum Gage height (ft)	Annual maximum Discharge (ft³/s)
		CLATSKANIE RIVER BASIN					
14247020	FALL CREEK NEAR CLATSKANIE, OR	Lat 46°05'47", long 123°14'56", in NW¼ sec.13, T.7 N., R.5 W., Columbia County, at culvert on private road, 100 feet south of State Highway 47, 2.5 miles west of Clatskanie.	2.07	1972-78	12-13-77	12.02	135
		BIG CREEK BASIN					
14248510	LITTLE CREEK NEAR KNAPPA, OR	Lat 46°08'44", long 123°36'16", in SW¼ sec.30, T.8 N., R.7 W., Clatsop County, at culvert on Hillcrest Road, 3 miles south of Knappa.	1.53	1972-78	12-13-77	14.35	220
		SALMON RIVER BASIN					
14303700	ALDER BROOK NEAR ROSE LODGE, OR	Lat 45°01'20", long 123°51'10", in SE¼ sec.25, T.6 S., R.10 W., Lincoln County, at culvert on State Highway 18, 0.1 mile upstream from mouth, and 1.5 miles northeast of Rose Lodge.	1.09	1954-78	12-13-77	12.64	128
		UMPQUA RIVER BASIN					
14312100	PARROTT CREEK AT ROSEBURG, OR	Lat 43°11'45", long 123°20'50", in NE¼ sec.25, T.27 S., R.6 W., Douglas County, at culvert on Starmer Street between Marsters and Booth Streets in Roseburg, 0.5 mile upstream from mouth.	2.42	1952-78	2- 3-78	11.23	92
14323020	BUCK CREEK TRIBUTARY NEAR SCOTTSBURG, OR	Lat 43°35'30", long 123°46'00", in NE¼NE¼ sec.9, T.23 S., R.9 W., Douglas County, at culvert on Buck Creek road, at mouth, and 5 miles south of Scottsburg.	-	1971-78	12-13-77	8.93	8.7
		BRUSH CREEK BASIN					
14327400	DRY RUN CREEK NEAR PORT ORFORD, OR	Lat 42°41'20", long 124°26'00", in NW¼ sec.25, T.33 S., R.15 W., Curry County, at culvert in Humbug Mountain State Park and 5 miles southeast of Port Orford.	.86	1954-78	11-24-77	15.85	101
		ROGUE RIVER BASIN					
14362050	KINNEY CREEK NEAR MCKEE BRIDGE, OR	Lat 42°05'35", long 123°07'40", in NW¼ sec.13, T.40 S., R.4 W., Jackson County, in Rogue River National Forest, at culvert on Forest Service road 405, 1.3 miles upstream from mouth, and 4 miles southwest of McKee Bridge.	2.83	1965-78	1-14-78	9.10	51

a Approximately.

Measurements of streamflow at point, other than gaging stations or partial-record stations are given in the following table. Those that are measurements of base flow are designated by an asterick (*), measurements of peak flow a (†).

Discharge measurements at miscellaneous sites during water year 1978

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Part 10		QUINN RIVER BASIN				
Tenmile Creek	Oregon Canyon Creek	SE¼SW¼ sec.16, T.40 S., R.43 E., above Sherburn upper diversion.	-	-	7-10-78	1.47
		SILVIES RIVER BASIN				
East Fork Silvies River	Malheur Lake	SW¼ sec.5, T.25 S., R.32½ E.	Indeterminate	-	10- 5-77	0
					11- 8-77	0
					12- 7-77	0
					1- 3-78	0
					1-31-78	0
					2-28-78	0
					3- 7-78	5.07
					3-29-78	40.8
					4-11-78	118
					4-26-78	68.9
					5-10-78	59.1
					5-23-78	27.1
					6- 1-78	16.4
					7-13-78	4.95
					9- 7-78	0
West Fork Silvies River	.....do.....	SE¼SW¼ sec.24, T.25 S., R.32 E.	Indeterminate	-	10- 5-77	0
					11- 8-77	0
					12- 7-77	0
					1-31-78	0
					2-28-78	0
					3- 7-78	0
					3-29-78	8.96
					4-12-78	11.7
					4-26-73	2.95
					5-10-78	2.94
					5-23-78	1.00
					6- 1-78	.40
					6-13-78	0
					6-28-78	0
Part 10		MALHEUR AND HARNEY LAKES BASIN				
Malheur Slough	Malheur Lake	NW¼SE¼ sec.31, T.24 S., R.33 E.	-	-	10- 5-77	0
					11- 8-77	0
					12- 7-77	0
					1- 3-78	0
					1-31-78	0
					2-28-78	0
					3- 7-78	0
					3-29-78	0
					4-26-78	.15
					6-28-73	0
					9- 7-78	0
Donner Und Blitzen River	.....do.....	SW¼ sec.2, T.27 S., R.31 E.	a760	-	10- 6-77	b35
					11- 8-77	40.6
					12- 7-77	53.4
					1- 3-78	51.5
					1-31-78	83.6
					2-28-78	58.0
					3-29-78	161
					4-11-78	173
					5-31-78	256
Sodhouse Spring	.....do.....	Lat 43°16'05", long 118°50'55".	-	-	4-11-78	10.9
Part 11		KLAMATH RIVER BASIN				
Munson Creek	Annie Creek	Lat 42°52'45", long 122°08'15".	-	1967-68, 1977	9-28-78	*5.31
Annie Creek	Wood River	Lat 42°46'00", long 122°03'20".	-	1967-68, 1977	9-28-78	53.5

Discharge measurements at miscellaneous sites during water year 1978--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Part 13		GRANDE RONDE RIVER BASIN				
Wallowa River	Grande Ronde	SE¼SE¼ sec.20, T.3 S., R.4 E., above confluence with Wallowa Lake at former gaging station.	42	1905, 1907-08, 1924-33‡, 1936-38‡, 1940-41‡, 1950-51, 1954-55, 1961, 1973	7- 7-77 7-18-77 7-21-77 8- 1-77	74.4 53.6 47.2 45.5
Part 14		UMATILLA RIVER BASIN				
Despain Gulch	Cold Springs Reservoir	NW¼ sec.30, T.4 N., R.31 E.	36.4	-	8-22-78	†5,480
Stage Gulch	Umatilla River	NE¼NE¼ sec.1, T.3 N., R.30 E.	34.1	-	8-22-78	†2,400
Part 14		JOHN DAY RIVER BASIN				
Bone Creek	John Day River	NW¼SE¼ sec.18, T.10 S., R.26 E.	1.43	-	6-30-78	†2,600
Portuguese Canyon	North Fork John Day River	NW¼NE¼ sec.14, T.19 S., R.26 E.	2.06	-	6-30-78	†890
Bologna Creek	John Day River	NE¼NE¼ sec.23, T.9 S., R.25 E.	24.9	-	6-30-78	†3,320
Spanish Hollow Tributary	Spanish Hollow	On line between sec.5 and 8, T.1 N., R.17 E.	6.13	1967-78‡	12-14-77	†135
Part 14		DESCHUTES RIVER BASIN				
Davis Creek	Wickiup Reservoir	SE¼ sec.7, T.22 S., R.8 E., approximately 400 ft downstream from North Davis Creek channel.	-	1969-70, 1973	10-10-78	18.2
Unnamed Spring	.....do.....	SE¼SW¼ sec.5, T.22 S., R.8 E.	-	-	10-10-78	13.3
Deschutes River	Columbia River	SE¼SE¼ sec.20, T.21 S., R.8 E., just below Sheep Springs, 15 mi northwest of La Pine.	-	1938-49‡, 1950, 1952-57, 1960-77	10- 4-77 11-16-77 12-29-77 2- 3-78 3-16-78 4-26-78 5-26-78 6-26-78 7-28-78 8-28-78	c389 c284 c246 c251 c238 c418 c639 c830 c654 c546
Part 14		WILLAMETTE RIVER BASIN				
Waldo Lake Tunnel	Black Creek	Outlet to unused tunnel from Klovdahl Bay in sec.36, T.21 S., R.5½ E., (unsurveyed).	-	1937, 1940, 1943, 1945, 1948, 1950-52, 1954, 1957, 1969-71, 1973-77	9-13-78	.66
French Pete Creek	South Fork McKenzie River	Lat 44°02'32", long 122°11'40" (unsurveyed).	31.2	1970-77	11-30-77 4-14-78 9-15-78	348 60.6 35.7
North Fork Rock Creek	Rock Creek	NE¼ sec.14, T.12 S., R.7 W.	-	1973, 1975-77	10- 4-77 6- 6-78 7-13-78 8-29-78	1.33 4.50 2.24 1.62
South Fork Rock Creek	.....do.....	SE¼ sec.14, T.12 S., R.7 W.	-	1973, 1975-77	10- 4-77 6- 6-78 7-13-78 8-29-78	2.22 7.50 4.34 2.71
Stillson Creek	.....do.....	SE¼ sec.13, T.12 S., R.7 W.	-	1973, 1975-77	10- 4-77 6- 6-78 7-13-78 8-29-78	.22 .70 .40 .31

Discharge measurements at miscellaneous sites during water year 1978--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Part 14		WILLAMETTE RIVER BASIN--Continued				
Middle Fork Rock Creek	Rock Creek	SE¼ sec.19, T.12 S., R.6 W.	-	1973, 1975-77	10- 4-77 6- 6-78 7-13-78 8-29-78	.38 1.40 .70 .44
Griffith Creek	.....do.....	SE¼NW¼ sec.30, T.12 S., R.6 W.	-	1973, 1975-77	10- 4-77 6- 6-78 7-13-78 8-29-78	.82 2.68 1.08 .69
Little North Santiam River	North Santiam River	SW¼NW¼ sec.22, T.8 S., R.4 E.	53.1	1973-77	1-27-78 3-16-78 4-20-78 6-13-78	342 149 305 240
Part 14		COOS RIVER BASIN				
West Fork Millicoma River	Millicoma River	NE¼NE¼ sec.9, T.24 S., R.11 W., below Stall Falls.	-	1972-77	4-26-78 9- 5-78	191 56.4
Part 14		ROGUE RIVER BASIN				
Dutton Creek	Castle Creek	Lat 42°53'40", long 122°10'00".	-	1967-68, 1977	9-28-78	.35
Castle Creek	Rogue River	Lat 42°54'45", long 122°17'00".	-	1967-68, 1977	9-28-78	.66
Castle Creek Tributary	Castle Creek	Lat 42°53'30", long 122°10'00".	-	1967-68 1977	9-28-78	.07
.....do.....	.....do.....	Lat 42°53'25", long 122°09'45".	-	1967-68, 1977	9-28-78	0
Cave Creek	Lake Creek	NW¼NE¼ sec.16, T.40 S., R.6 W.	-	1966-67	9- 5-77	.28
River Styx	Cave Creek	SE¼SE¼ sec.9, T.40 S., R.6 W.	-	1966-67	9- 5-77	.11
Lake Creek	Grayback Creek	NE¼SE¼ sec.10, T.40 S., R.6 W.	-	1966-67	9- 5-77	.30

‡ Operated as a continuous record gaging station.
a Approximately.
b Estimated.
c Base flow from intervening springs can be obtained by subtracting flow of Deschutes River below Crane Prairie Reservoir.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

UMPQUA RIVER BASIN

DATE	TIME	SAMPLING DEPTH (FT)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	OXYGEN, DISSOLVED (MG/L)	PH (UNITS)	TRANSPARENCY (SECCHI DISK) (IN)	COLOR (PLATINUM-COBALT UNITS)	SILICA, DISSOLVED (MG/L AS SIO2)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
430031122355400 - SKOOKUM POND (LAT 43 00 31 LONG 122 35 54)												
AUG , 1978												
23...	1200	3.0	16.1	93	4.9	6.8	96	40	6.9	15	2.4	5.1
430352122311600 - BUCKEYE LAKE (LAT 43 03 52 LONG 122 31 16)												
SEP , 1978												
19...	1430	22	10.5	224	6.4	7.1	312	5	23	20	14	4.2
430446122302300 - FISH LAKE (LAT 43 04 46 LONG 122 30 23)												
SEP , 1978												
19...	1915	100	4.2	62	3.6	6.0	478	0	13	8.6	1.3	2.5
431107122095700 - DIAMOND LAKE (LAT 43 11 07 LONG 122 09 57)												
SEP , 1978												
18...	1830	30	12.3	36	9.1	7.3	150	5	6.1	2.6	1.0	3.6
18...	1835	48	11.7	35	8.6	7.1	--	15	6.4	2.6	1.1	3.8
431548122250600 - TOKETEE RESERVOIR (LAT 43 15 48 LONG 122 25 06)												
AUG , 1978												
21...	1830	15	9.6	57	10.0	6.9	204	0	28	--	1.9	5.4
431919122113800 - LEMOLO LAKE (LAT 43 19 19 LONG 122 11 38)												
SEP , 1978												
20...	1630	16	8.4	52	9.8	7.4	76	0	27	3.6	1.6	4.6
432344123220800 - SUTHERLIN LOG POND (LAT 43 23 44 LONG 123 22 08)												
MAY , 1978												
08...	1545	9.0	16.5	64	7.7	7.4	43	40	4.0	3.7	2.5	5.0
432438122065200 - TIMPANOGAS LAKE (LAT 43 34 28 LONG 122 06 52)												
AUG , 1978												
01...	1400	49	5.5	10	8.6	6.4	450	5	9.2	1.1	.2	1.0
433439124093800 - NORTH TENMILE LAKE (LAT 43 34 39 LONG 124 09 38)												
OCT , 1977												
19...	1230	11	16.5	89	6.8	7.0	55	20	5.1	6.3	2.5	8.0
433714123221100 - WHIPPLE RESERVOIR (LAT 43 37 14 LONG 123 22 11)												
NOV , 1977												
02...	1345	16	12.3	131	9.3	7.4	72	25	14	14	4.4	6.8
433802123173900 - MT. BALDY LOG POND (LAT 43 38 02 LONG 123 17 39)												
NOV , 1977												
02...	1600	1.0	12.9	224	.1	6.4	4.0	>500	18	13	4.3	13
433802124105200 - CLEAR LAKE, DIEL SITE (LAT 43 38 02 LONG 124 10 52)												
SEP , 1978												
07...	1800	9.0	--	--	--	--	--	--	7.2	5.7	1.9	14

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

UMPQUA RIVER BASIN

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS P)	HARD-NESS (MG/L AS CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
430031122355400 - SKOOKUM POND (LAT 43 00 31 LONG 122 35 54)												
AUG , 1978 23...	.9	51	3.6	1.0	.1	.03	.03	.83	.01	.09	47	96
430352122311600 - BUCKEYE LAKE (LAT 43 03 52 LONG 122 31 16)												
SEP , 1978 19...	2.8	120	4.4	.7	.1	.01	.01	.37	.00	.04	110	122
430446122302300 - FISH LAKE (LAT 43 04 46 LONG 122 30 23)												
SEP , 1978 19...	.4	26	3.5	.7	.0	.05	.05	.26	.00	.20	27	60
431107122095700 - DIAMOND LAKE (LAT 43 11 07 LONG 122 09 57)												
SEP , 1978 18...	1.0	18	1.2	.5	.0	.03	.03	.52	.00	.04	11	24
18...	1.1	--	1.7	.7	.0	.01	.02	1.1	.00	.10	11	30
431548122250600 - TOKETEE RESERVOIR (LAT 43 15 48 LONG 122 25 06)												
AUG , 1978 21...	1.5	28	1.9	2.1	.1	.00	.01	.10	.03	.05	18	56
431919122113800 - LEMOLO LAKE (LAT 43 19 19 LONG 122 11 38)												
SEP , 1978 20...	1.4	25	1.8	2.3	.0	.02	.02	.15	.04	.05	16	61
432344123220800 - SUTHERLIN LOG POND (LAT 43 23 44 LONG 123 22 08)												
MAY , 1978 08...	3.2	25	3.3	4.2	.0	.01	.01	.71	.01	.06	20	59
432438122065200 - TIMPANOGAS LAKE (LAT 43 34 28 LONG 122 06 52)												
AUG , 1978 01...	.4	9	2.8	.4	.0	.03	.06	.22	.00	.01	4	20
433439124093800 - NORTH TENMILE LAKE (LAT 43 34 39 LONG 124 09 38)												
OCT , 1977 19...	1.0	32	1.2	8.9	.1	.02	.02	.54	.00	.03	26	60
433714123221100 - WHIPPLE RESERVOIR (LAT 43 37 14 LONG 123 22 11)												
NOV , 1977 02...	1.0	51	.8	15	.1	.01	.01	.29	.00	.01	53	93
433802123173900 - MT. BALDY LOG POND (LAT 43 38 02 LONG 123 17 39)												
NOV , 1977 02...	24	74	36	25	.2	.16	.16	4.3	.72	1.7	50	243
433802124105200 - CLEAR LAKE, DIEL SITE (LAT 43 38 02 LONG 124 10 52)												
SEP , 1978 07...	1.0	--	4.4	17	.0	--	--	--	--	--	22	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

UMPQUA RIVER BASIN

DATE	TIME	SAMPLING DEPTH (FT)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	OXYGEN, DISSOLVED (MG/L)	PH (UNITS)	TRANSPARENCY (SECCHI DISK) (IN)	COLOR (PLATINUM-COBALT UNITS)	SILICA, DISSOLVED (MG/L AS SIO2)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
433802124105201 - CLEAR LAKE, SITE ONE (LAT 43 38 02 LONG 124 10 52.01)												
OCT , 1977												
27...	1630	23	15.7	83	10.2	7.4	274	5	6.8	2.9	1.8	12
SEP , 1978												
07...	1325	98	--	--	--	--	--	--	8.8	3.8	2.0	15
434826124090100 - TAHKENITCH LAKE (LAT 43 48 26 LONG 124 09 01)												
OCT , 1977												
12...	1315	8.0	16.5	71	8.7	7.1	146	10	3.3	3.5	1.7	8.9
435254124064500 - SILTCOOS LAKE (LAT 43 52 54 LONG 124 06 45)												
OCT , 1977												
12...	1030	8.0	16.1	486	9.9	7.5	196	5	3.9	4.7	8.5	79
14323280 - EEL LAKE NEAR LAKESIDE,OREG. (LAT 43 36 17 LONG 124 10 28)												
OCT , 1977												
19...	1430	23	16.5	81	9.2	7.5	106	5	1.0	3.3	1.9	9.9

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

UMPQUA RIVER BASIN

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P)	HARDNESS (MG/L AS CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
433802124105201 - CLEAR LAKE, SITE ONE (LAT 43 38 02 LONG 124 10 52.01)												
OCT , 1977 27...	1.0	15	2.1	17	.0	.00	.01	.24	.00	.00	15	60
SEP , 1978 07...	1.0	--	6.0	15	.0	.27	.24	.22	.00	.01	18	--
434826124090100 - TAHKENITCH LAKE (LAT 43 48 26 LONG 124 09 01)												
OCT , 1977 12...	.5	16	.9	13	.0	.00	.00	.32	.00	.02	16	63
435254124064500 - SILTCOOS LAKE (LAT 43 52 54 LONG 124 06 45)												
OCT , 1977 12...	3.0	11	13	13	.0	.01	.01	.31	.00	.01	47	272
14323280 - EEL LAKE NEAR LAKESIDE,OREG. (LAT 43 36 17 LONG 124 10 28)												
OCT , 1977 19...	.9	18	2.1	14	.0	.00	.01	.38	.00	.00	16	60

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

UMPQUA RIVER BASIN

DATE	TIME	SAMP- LING DEPTH (FT)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	OXYGEN, DIS- SOLVED (MG/L)	PH (UNITS)	TRANS- PAR- ENCY (SECCHI DISK) (IN)	COLOR (PLAT- INUM- COBALT UNITS)	ALKA- LINITY (MG/L AS CACO3)	HARD- NESS (MG/L AS CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
424428123250800 - DOLLAR COMPANY LOG POND (LAT 42 44 28 LONG 123 25 08)											
MAY , 1978 11...	1115	1.0	15.3	140	.4	6.5	2.4	>500	53	31	146
424457123244900 - DOLLAR COMPANY FISH POND (LAT 42 44 57 LONG 123 24 49)											
MAY , 1978 11...	1230	3.0	16.9	74	10.5	8.8	33	40	32	28	66
425505123142400 - CANYONVILLE RESERVOIR (LAT 42 55 05 LONG 123 14 24)											
NOV , 1977 04...	1300	4.5	6.4	165	11.1	7.7	108	10	64	72	137
425617123152500 - HERBERT COUNTY PARK POND (LAT 42 56 17 LONG 123 15 25)											
NOV , 1977 04...	1230	4.5	12.2	114	8.6	7.3	108	15	44	59	73
425817123211600 - HERBERT LOG POND (LAT 42 58 17 LONG 123 21 16)											
MAY , 1978 08...	1400	.8	17.9	166	1.3	6.1	4.0	500	51	40	168
430031122355400 - SKOOKUM POND (LAT 43 00 31 LONG 122 35 54)											
AUG , 1978 23...	1200	3.0	16.1	93	4.9	6.8	96	40	51	47	96
430141122285300 - TRIANGLE LAKE (LAT 43 01 41 LONG 122 28 53)											
AUG , 1978 23...	1530	6.0	10.5	--	11.0	7.6	156	5	45	34	85
430352122311600 - BUCKEYE LAKE (LAT 43 03 52 LONG 122 31 16)											
SEP , 1978 19...	1430	22	10.5	224	6.4	7.1	312	5	120	110	122
430417123410000 - KINNAN RESERVOIR (LAT 43 04 17 LONG 123 41 00)											
NOV , 1977 03...	1545	12	11.8	76	7.6	7.1	59	25	34	28	72
430446122302300 - FISH LAKE (LAT 43 04 46 LONG 122 30 23)											
SEP , 1978 19...	1915	100	4.2	62	3.6	6.0	478	0	26	27	60
430448123130500 - ELEANOR RESERVOIR (LAT 43 04 48 LONG 123 13 05)											
MAY , 1978 09...	1130	7.0	17.8	477	12.9	9.0	157	15	54	110	312
430614123351800 - WAGEMAN RESERVOIR (LAT 43 06 14 LONG 123 35 18)											
MAY , 1978 02...	1730	18	9.0	72	2.2	7.2	87	30	30	28	64

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

UMPQUA RIVER BASIN

DATE	TIME	SAMPLING DEPTH (FT)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	OXYGEN, DISSOLVED (MG/L)	PH (UNITS)	TRANSPARENCY (SECCHI DISK) (IN)	COLOR (PLATINUM-COBALT UNITS)	ALKALINITY (MG/L AS CACO3)	HARDNESS (MG/L AS CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
430726123381100 - IVERSON RESERVOIR (LAT 43 07 26 LONG 123 38 11)											
NOV , 1977											
03...	1230	10	10.8	148	8.2	7.5	87	20	67	64	99
430732122090600 - HORSE LAKE (LAT 43 07 32 LONG 122 09 06)											
AUG , 1978											
02...	0730	5.5	20.0	6	6.3	6.6	132	10	4	1	12
430743122091700 - TEAL LAKE (UMPQUA FOREST) (LAT 43 07 43 LONG 122 09 17)											
AUG , 1978											
02...	0845	1.5	20.9	2	6.2	4.9	48	10	2	3	5
431002123261100 - BUELL RESERVOIR (LAT 43 10 02 LONG 123 26 11)											
NOV , 1977											
03...	1100	1.0	10.4	204	8.6	7.7	4.0	320	90	94	141
431005122200000 - SKOOKUM LAKE (LAT 43 10 05 LONG 122 20 00)											
SEP , 1978											
20...	1200	10	9.7	11	9.2	6.7	252	5	7	5	10
431027123010700 - SAMPSON LAKE (LAT 43 10 27 LONG 123 01 07)											
MAY , 1977											
16...	0915	1.0	12.0	68	4.9	7.1	30	50	33	22	50
431105123220300 - SUN STUDS LOG POND (LAT 43 11 05 LONG 123 22 03)											
MAY , 1978											
04...	1000	1.0	14.9	162	.4	5.6	2.0	>500	34	60	190
431107122095700 - DIAMOND LAKE (LAT 43 11 07 LONG 122 09 57)											
SEP , 1978											
18...	1830	30	12.3	36	9.1	7.3	150	5	18	11	24
18...	1835	48	11.7	35	8.6	7.1	--	15	--	11	30
431124122420900 - HEMLOCK LAKE (LAT 43 11 24 LONG 122 42 09)											
AUG , 1977											
04...	1215	10	22.6	44	8.4	8.1	45	25	20	24	46
431257123193800 - CHAMPION WOOD PRODUCTS L P (DIAMOND LAKE ROAD) (LAT 43 12 57 LONG 123 19 38)											
MAY , 1978											
02...	1300	1.0	15.6	468	.5	7.2	2.0	>500	170	12	411
431301122432600 - LAKE IN THE WOODS (LAT 43 13 01 LONG 122 43 26)											
OCT , 1977											
13...	1515	16	15.7	154	8.6	6.8	189	5	17	38	96
431301123161400 - NORDIC LOG POND (LAT 43 13 01 LONG 123 16 14)											
AUG , 1977											
04...	0930	1.6	20.2	261	.1	5.9	6.0	500	89	54	284

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

UMPQUA RIVER BASIN

DATE	TIME	SAMPLING DEPTH (FT)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	OXYGEN, DISSOLVED (MG/L)	PH (UNITS)	TRANSPARENCY (SECCHI DISK) (IN)	COLOR (PLATINUM-COBALT UNITS)	ALKALINITY (MG/L AS CACO3)	HARDNESS (MG/L AS CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
431337123210600 - CHAMPION WOOD PRODUCTS L P (GARDEN VALLEY RD) (LAT 43 13 37 LONG 123 21 06)											
MAY , 1978 02...	1130	2.5	14.9	264	.6	6.9	12	350	130	120	200
431338123222200 - STEWART PARK POND (LAT 43 13 38 LONG 123 22 22)											
AUG , 1977 02...	1230	300	25.7	228	4.5	10.0	28	35	83	79	135
AUG , 1978 02...	1230	3.0	--	--	--	--	--	--	--	--	--
431343122353700 - TWIN LAKE (WEST) (LAT 43 13 43 LONG 122 35 37)											
AUG , 1978 17...	1200	15	18.1	47	7.6	4.6	360	0	1	11	39
431350122353100 - TWIN LAKE (EAST) (LAT 43 13 50 LONG 122 35 31)											
AUG , 1978 17...	1435	26	18.1	36	4.6	5.5	624	0	3	10	32
431421123064100 - HENDY RESERVOIR (LAT 43 14 21 LONG 123 06 41)											
AUG , 1977 03...	0930	20	14.5	107	5.8	6.5	99	35	48	50	78
431442122165100 - CLEARWATER NO. 1 (STUMP LAKE) (LAT 43 14 42 LONG 122 16 51)											
JUL , 1978 31...	1930	4.0	11.2	58	9.7	7.6	132	5	32	18	80
431514122005600 - LAKE LUCILLE (LAT 43 15 14 LONG 122 00 56)											
AUG , 1977 04...	1500	3.5	24.8	65	4.9	6.4	84	50	39	33	54
431521123252000 - GUIDO POND (WEST) (LAT 43 15 21 LONG 123 25 20)											
MAY , 1978 01...	1300	6.2	17.6	296	10.6	8.6	30	30	150	150	208
431524122191200 - CLEARWATER NO 1 FOREBAY (LAT 43 15 24 LONG 122 19 12)											
AUG , 1978 14...	1930	4.0	10.1	56	10.3	7.4	96	0	30	8	56
431524123251200 - GUIDO POND (EAST) (LAT 43 15 24 LONG 123 25 12)											
MAY , 1978 01...	1530	1.6	18.3	213	10.1	8.9	8.0	350	85	93	134
431525121595900 - MAIDU LAKE (LAT 43 15 25 LONG 121 59 59)											
AUG , 1978 22...	1430	6.5	14.1	20	8.2	6.7	156	0	10	5	40
431548122250600 - TOKETEE RESERVOIR (LAT 43 15 48 LONG 122 25 06)											
AUG , 1978 21...	1830	15	9.6	57	10.0	6.9	204	0	28	18	56

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

UMPQUA RIVER BASIN

DATE	TIME	SAMPLING DEPTH (FT)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	OXYGEN, DISSOLVED (MG/L)	PH (UNITS)	TRANSPARENCY (SECCHI DISK) (IN)	COLOR (PLATINUM-COBALT UNITS)	ALKALINITY (MG/L AS CACO3)	HARDNESS (MG/L AS CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
431552122242900 - CLEARWATER NO 2 FOREBAY (LAT 43 15 52 LONG 122 24 29)											
AUG , 1978 21...	1930	6.5	7.9	57	10.8	7.4	156	0	30	17	60
431615122271500 - FISH CREEK FOREBAY (LAT 43 16 15 LONG 122 27 15)											
AUG , 1978 15...	2045	4.5	12.0	48	11.3	7.3	108	5	27	20	46
431659123051800 - LITTLE RIVER LOG POND (LAT 43 16 59 LONG 123 05 18)											
AUG , 1977 02...	1340	5.0	24.2	65	3.9	6.4	57	35	21	24	54
431702123215100 - ROD AND GUN CLUB POND (LAT 43 17 02 LONG 123 21 51)											
JUL , 1977 27...	1100	3.0	24.3	181	10.8	9.3	33	60	73	74	115
431714123220100 - BEAVER STATE SAND AND GRAVEL POND (SOUTH) (LAT 43 17 14 LONG 123 22 01)											
JUL , 1977 26...	1200	1.6	24.5	121	9.4	8.7	9.0	100	53	57	96
431716123213800 - DOUGLAS LUMBER COMPANY LOG POND (LAT 43 17 16 LONG 123 21 38)											
JUL , 1977 26...	1130	.6	20.4	99	2.4	5.8	3.0	>500	37	24	202
431721123220600 - BEAVER STATE SAND AND GRAVEL POND (NORTH) (LAT 43 17 21 LONG 123 22 06)											
JUL , 1977 27...	1430	10	24.8	263	6.3	8.6	96	15	100	102	158
431726122241800 - LEMOLO FOREBAY (LAT 43 17 26 LONG 122 24 18)											
AUG , 1978 15...	1700	21	12.8	69	2.0	7.3	88	50	38	5	60
431743123071400 - UPDEGRAVE RESERVOIR (LAT 43 17 43 LONG 123 07 14)											
AUG , 1977 02...	1100	11	21.8	172	6.6	6.8	118	15	48	80	105
431751123212000 - MAR-LINN POND (LAT 43 17 51 LONG 123 21 20)											
JUL , 1977 28...	1000	13	20.6	205	.1	7.0	50	50	105	110	158
431810123122600 - WHISTLERS BEND RESERVOIR (LAT 43 18 10 LONG 123 12 26)											
AUG , 1977 02...	1430	8.0	24.6	134	6.7	9.1	87	15	62	95	95
431811122293800 - SODA SPRINGS RESERVOIR (LAT 43 18 11 LONG 122 29 38)											
JUL , 1978 31...	1700	15	13.8	61	9.6	7.7	189	5	31	17	60

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

UMPQUA RIVER BASIN

DATE	TIME	SAMPLING DEPTH (FT)	TEMPERATURE (DFG C)	SPFCIFIC CONDUCTANCE (MICROMHOS)	OXYGEN, DISSOLVED (MG/L)	PH (UNITS)	TRANSPARENCY (SECCHI DISK) (IN)	COLOR (PLATINUM-COBALT UNITS)	ALKALINITY (MG/L AS CACO3)	HARDNESS (MG/L AS CACO3)	SOLIDS, RESIOUE AT 180 DEG. C DISSOLVED (MG/L)
431819122523700 - BUTLER RESERVOIR (LAT 43 18 19 LONG 122 52 37)											
SEP , 1978 18...	1500	6.5	16.4	89	8.9	7.2	156	5	44	36	72
431919122113800 - LEMOLO LAKE (LAT 43 19 19 LONG 122 11 38)											
SEP , 1978 20...	1630	16	8.4	52	9.8	7.4	76	0	25	16	61
431919123201500 - GEORGIA PACIFIC LOG POND AT WILBUR (LAT 43 19 19 LONG 123 20 15)											
SEP , 1978 21...	1045	1.5	14.4	226	1.6 *	6.8	36	70	115	98	140
432038123352200 - GRIER RESERVOIR (LAT 43 20 28 LONG 123 35 22)											
MAY , 1978 15...	1500	7.0	17.0	42	11.9	8.3	98	10	20	13	34
432129122064800 - LAKE CHARLINE (LAT 43 21 29 LONG 122 06 48)											
AUG , 1978 01...	1130	5.0	21.0	3	7.2	6.4	120	5	4	1	10
432150122062400 - CALAMUT LAKE (LAT 43 21 50 LONG 122 06 24)											
AUG , 1978 01...	0915	11	20.8	2	7.2	5.6	264	5	5	2	4
432236123144800 - DENLEY RESERVOIR (LAT 43 22 36 LONG 123 14 48)											
JUL , 1977 29...	1015	9.0	23.5	1540	8.0	7.3	148	10	27	250	884
432240123191800 - GEORGIA PACIFIC LOG POND AT SUTHERLIN (LAT 43 22 40 LONG 123 19 18)											
MAY , 1978 03...	1230	1.6	16.0	--	1.7	6.9	6.0	400	40	21	214
432248123165400 - COOPFR CREEK RESERVOIR (LAT 43 22 48 LONG 123 16 54)											
JUL , 1977 28...	1445	30	15.8	258	5.8	6.7	150	10	40	75	164
432257123191200 - SUTHERLIN SCHOOL DISTRICT NO. 130 (LAT 43 22 57 LONG 123 19 12)											
MAY , 1978 03...	1600	3.0	17.3	208	9.9	8.4	30	100	91	49	170
432335123151000 - PLAT 1 RESERVOIR (LAT 43 23 35 LONG 123 15 10)											
JUL , 1977 28...	1200	5.0	23.6	353	8.4	8.7	83	20	47	88	214
432341122061500 - INDIGO LAKE (LAT 43 23 41 LONG 122 06 15)											
AUG , 1978 15...	1030	18	17.9	8	6.5	6.1	402	0	8	1	4

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

UMPQUA RIVER BASIN

DATE	TIME	SAMPLING DEPTH (FT)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	OXYGEN, DISSOLVED (MG/L)	PH (UNITS)	TRANSPARENCY (SECCHI DISK) (IN)	COLOR (PLATINUM-COBALT UNITS)	ALKALINITY (MG/L AS CACO3)	HARDNESS (MG/L AS CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
432344122074900 - JUNE LAKE (LAT 43 23 44 LONG 122 07 49)											
AUG , 1978 03...	1100	8.0	21.9	2	7.4	6.4	204	0	2	1	4
432344123220800 - SUTHERLIN LOG POND (LAT 43 23 44 LONG 123 22 08)											
MAY , 1978 08...	1545	9.0	16.5	64	7.7	7.4	43	40	25	20	59
432408122054400 - PEPSI LAKE (LAT 43 24 08 LONG 122 05 44)											
AUG , 1978 16...	1200	5.0	15.4	2	8.6	5.5	132	0	1	1	3
432410122050700 - UNNAMED 25S 5 1/2E S14 (LAT 43 24 10 LONG 122 05 07)											
AUG , 1978 15...	1415	7.0	15.4	2	8.5	5.4	180	0	1	1	1
432416122051200 - AMOS AND ANDY LAKE (LAT 43 24 16 LONG 122 05 12)											
AUG , 1978 15...	1615	5.0	15.0	2	8.8	5.4	120	5	1	1	9
432438122065200 - TIMPANOGAS LAKE (LAT 43 34 28 LONG 122 06 52)											
AUG , 1978 01...	1400	49	5.5	10	8.6	6.4	450	5	9	4	20
432439122070900 - LITTLE TIMPANOGAS LAKE (LAT 43 24 39 LONG 122 07 09)											
AUG , 1978 01...	1400	13	21.5	10	7.6	7.0	312	5	11	2	13
432439122075200 - DEE LAKE (LAT 43 24 39 LONG 122 07 52)											
AUG , 1978 14...	1715	10	19.9	20	7.7	7.6	174	5	11	7	42
432453123183500 - MARTIN MILLPOND (LAT 43 24 53 LONG 123 18 35)											
MAY , 1978 10...	1300	5.0	14.9	179	.4	6.5	24	400	78	72	188
432509122071400 - OPAL LAKE (LAT 43 25 09 LONG 122 07 14)											
AUG , 1978 02...	1300	20	21.2	18	8.0	7.6	432	0	10	6	20
432510122061100 - UNNAMED 25S 5 1/2E S10 (LAT 43 25 10 LONG 122 06 11)											
AUG , 1978 16...	1830	5.0	15.0	2	9.0	5.2	120	0	1	1	2
432558122301600 - BULLPUP LAKE (LAT 43 25 58 LONG 122 30 16)											
AUG , 1978 24...	1040	3.5	13.4	18	8.3	6.4	84	5	10	6	25

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

UMPQUA RIVER BASIN

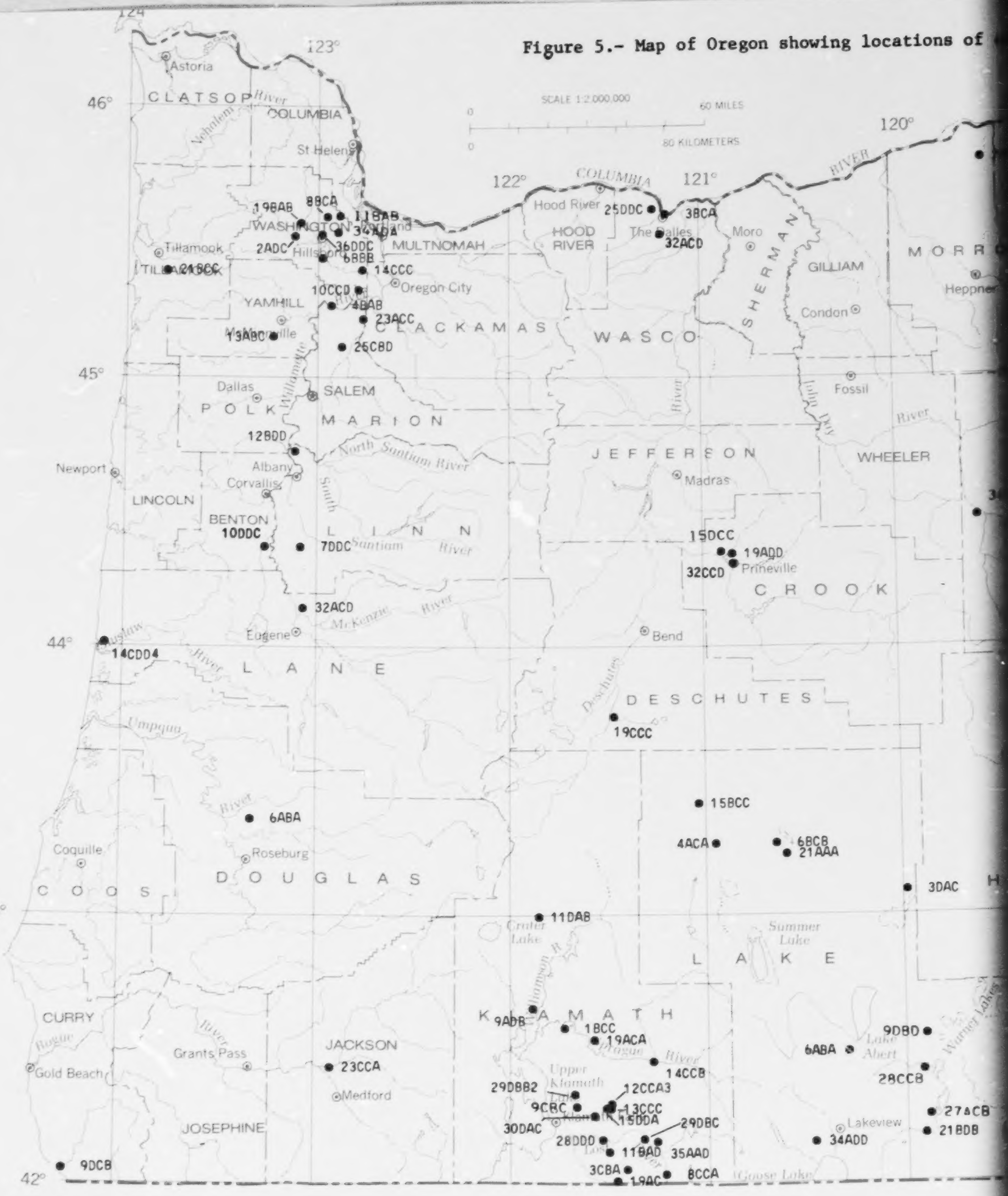
DATE	TIME	SAMP-LING DEPTH (FT)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	OXYGEN, DIS-SOLVED (MG/L)	PH (UNITS)	TRANS-PAR-ENCY (SECCHI DISK) (IN)	COLOR (PLAT-INUM-COBALT UNITS)	ALKA-LINITY (MG/L AS CACO3)	HARD-NESS (MG/L AS CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
433900123203000 - HAYHURST ROAD RESERVOIR (LAT 43 39 00 LONG 123 20 30)											
NOV , 1977 02...	1130	9.8	13.4	147	9.2	7.6	118	15	61	56	95
433925123194700 - DRAIN LOG POND (LAT 43 39 25 LONG 123 19 47)											
MAY , 1977 11...	0900	1.6	12.1	237	.6	6.7	8.0	200	70	45	174
433937124114800 - LAKE MARIE (LAT 43 39 37 LONG 124 11 48)											
AUG , 1978 22...	1200	8.0	14.6	2	8.7	5.4	204	0	1	1	1
433957123213700 - SMITH RIVER LOG POND (LAT 43 39 57 LONG 123 21 37)											
OCT , 1977 14...	1200	3.0	15.2	113	5.0	6.6	79	20	25	32	76
434103123175000 - LITTLE RESERVOIR NO. 5 (LAT 43 41 03 LONG 123 17 50)											
NOV , 1977 05...	1000	1.3	11.7	106	.9	6.2	6.0	400	40	31	138
434324124060900 - GARDINER RESERVOIR (LAT 43 43 24 LONG 124 06 09)											
OCT , 1977 19...	0930	10	15.0	94	6.0	6.7	134	50	28	22	89
434451123474100 - WASSEN LAKE (LAT 43 44 51 LONG 123 47 51)											
MAY , 1978 16...	1230	1.0	10.7	51	10.8	6.6	104	20	17	13	44
434520124101400 - THREEMILE LAKE (SOUTH) (LAT 43 45 20 LONG 124 10 14)											
OCT , 1977 26...	1530	10	15.1	149	11.7	7.5	156	5	11	19	84
434601124100600 - THREEMILE LAKE (NORTH) (LAT 43 46 01 LONG 124 10 06)											
OCT , 1977 26...	1645	6.0	15.0	156	10.5	7.4	132	5	14	21	98
434717124085700 - ELBOW LAKE (LAT 43 47 17 LONG 124 08 57)											
OCT , 1977 13...	1130	13	15.6	179	6.1	6.8	173	30	33	24	86
434826124090100 - TAHKENITCH LAKE (LAT 43 48 26 LONG 124 09 01)											
OCT , 1977 12...	1315	8.0	16.5	71	8.7	7.1	146	10	16	16	63
434938124085500 - PERKINS LAKE (LAT 43 39 48 LONG 124 08 55)											
MAY , 1978 16...	1730	25	9.8	108	2.9	6.4	134	15	11	16	66

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

UMPQUA RIVER BASIN

DATE	TIME	SAMPLING DEPTH (FT)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	OXYGEN, DISSOLVED (MG/L)	PH (UNITS)	TRANSPARENCY (SECCHI DISK) (IN)	COLOR (PLATINUM-COBALT UNITS)	ALKALINITY (MG/L AS CACO3)	HARDNESS (MG/L AS CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
433234123175800 - WEAVER RESERVOIR (LAT 43 32 34 LONG 123 17 58)											
AUG , 1977 05...	0930	3.0	23.8	98	7.8	7.5	31	25	42	43	68
433439124093800 - NORTH TENMILE LAKE (LAT 43 34 39 LONG 124 09 38)											
OCT , 1977 19...	1230	11	16.5	89	6.8	7.0	55	20	32	26	60
433539123164100 - YONCALLA LOG POND (LAT 43 35 39 LONG 123 16 41)											
OCT , 1977 21...	1000	5.0	14.3	86	5.4	6.8	26	40	27	46	66
433545123503800 - LOON LAKE (LAT 43 35 45 LONG 123 50 38)											
NOV , 1977 01...	1240	33	10.3	56	4.8	6.8	157	15	17	16	51
433714123221100 - WHIPPLE RESERVOIR (LAT 43 37 14 LONG 123 22 11)											
NOV , 1977 02...	1345	16	12.3	131	9.3	7.4	72	25	51	53	93
433737124105000 - TEAL LAKE NEAR REEDSPORT (LAT 43 37 37 LONG 124 10 50)											
OCT , 1977 20...	1300	16	15.4	88	8.9	6.9	311	5	17	20	60
433745124104000 - LAKE EDNA (LAT 43 37 45 LONG 124 10 40)											
OCT , 1977 20...	1000	25	16.5	81	9.1	7.0	280	5	15	13	48
433802123173900 - MT. BALDY LOG POND (LAT 43 38 02 LONG 123 17 39)											
NOV , 1977 02...	1600	1.0	12.9	224	.1	6.4	4.0	>500	74	50	243
434953124085100 - LOST LAKE (LAT 43 59 53 LONG 124 08 51)											
OCT , 1977 13...	0930	15	15.2	130	9.2	7.0	217	15	13	20	78
435044124085000 - CARTER LAKE (LAT 43 50 44 LONG 124 08 50)											
OCT , 1977 12...	1200	6.0	15.5	133	9.2	7.1	144	5	11	10	79
435232123355400 - ESMOND LAKE (LAT 43 52 32 LONG 123 35 54)											
MAY , 1978 17...	1100	23	7.9	80	.2	6.5	108	300	30	16	70
435254124064500 - SILTCOOS LAKE (LAT 43 52 54 LONG 124 06 45)											
OCT , 1977 12...	1030	8.0	16.1	486	9.9	7.5	196	5	11	47	272

Figure 5.- Map of Oregon showing locations of



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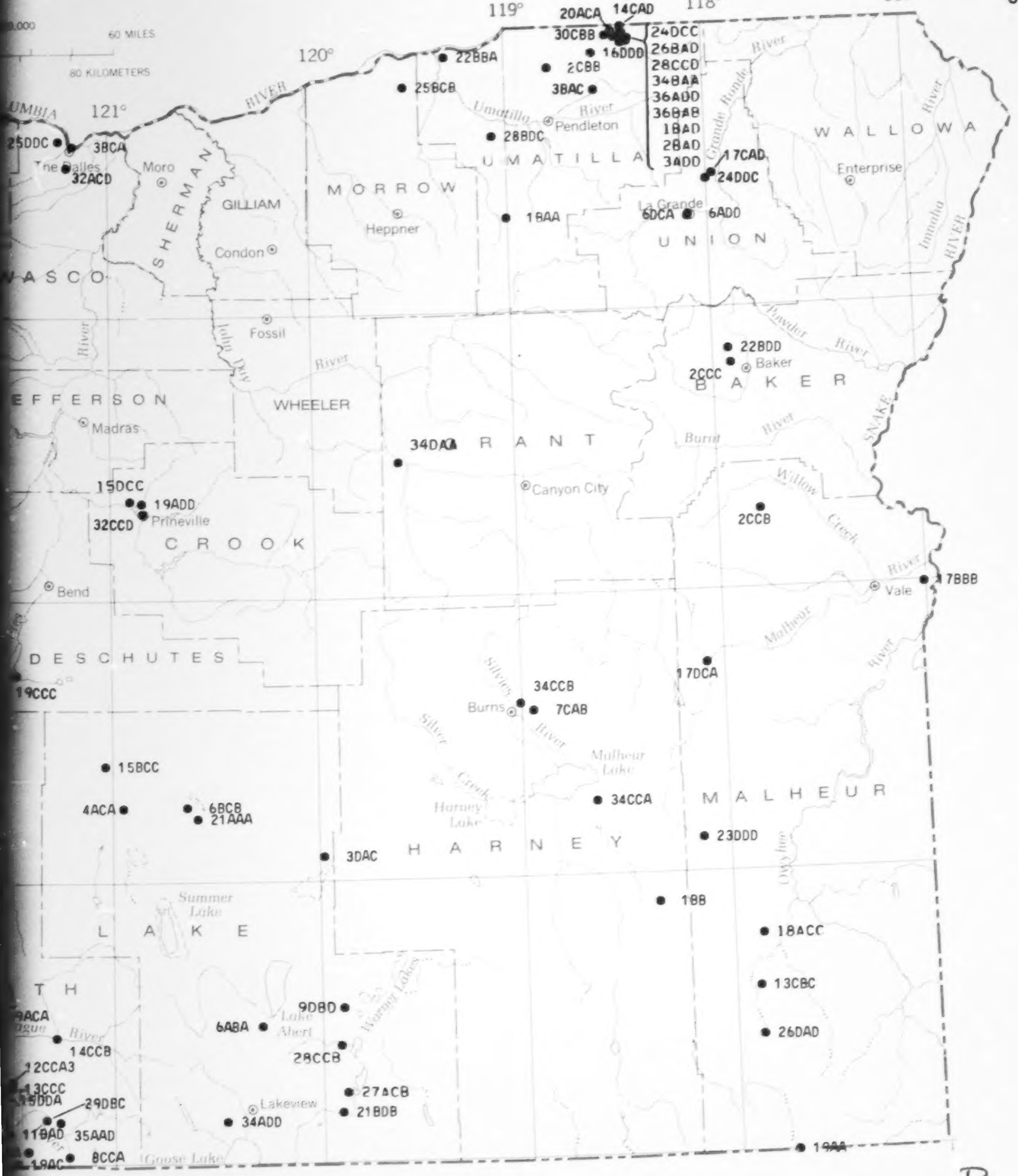
A

.- Map of Oregon showing locations of observation wells.



B

BAKER COUNTY

445125117551501. Local number, 8S/39E-22bdd.
LOCATION.--Lat 44°51'16", long 117°55'15", Hydrologic Unit 17050203.
Owner: Baker County.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Dug observation well, size 18x18 in (460 x 460 mm), depth 11 ft (3.4 m) cribbed with wood to 9 ft (2.7 m), perforated 12-in (300 mm) steel casing 7-11 ft (2-3 m).
DATUM.--Land surface datum is 3,385.78 ft (1,031.99 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of 1½-in (30 mm) pipe, 0.50 ft (0.15 m) above datum.
PERIOD OF RECORD.--1936, 1938 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.52 ft (0.46 m) below datum, Feb. 22, 1973; lowest measured, 9.87 ft (3.01 m) below datum, Sept. 29, 1939.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	9.36	MAY 9	7.75	AUG 10	5.10	-	-

444820117543501. Local number 9S/39E-2ccc.
LOCATION.--Lat 44°48'12", long 117°54'33", Hydrologic Unit 17050203.
Owner: Kermit Hansen.
AQUIFER.--Sand and gravel.
WELL CHARACTERISTICS.--Drilled unused well, diam 12 in (300 mm), depth 321 ft (98 m) perforated 0-321 ft (0-98 m).
DATUM.--Altitude of land surface datum is about 3,410 ft (1,039 m). Measuring point: Top of casing, 0.30 ft (0.09 m) above datum.
PERIOD OF RECORD.--1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.37 ft (0.42 m) below datum, Feb. 17, 1965; lowest measured 13.95 ft (4.25 m) below datum, Jan. 20, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	8.84	MAY 9	4.69	AUG 10	7.50	-	-

BENTON COUNTY

442145123163201. Local number 14S/5W-10ddc.
LOCATION.--Lat 44°21'45", long 123°16'32", Hydrologic Unit 17090003.
Owner: Chris Lindseth.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Driven unused well, diam 1½ in (30 mm), depth 19 ft (5.8 m), cased to 19 ft (5.8 m).
DATUM.--Land surface datum is 267.49 ft (81.53 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of 1½-in (30 mm) pipe, 2.40 ft (0.73 m) above datum.
PERIOD OF RECORD.--1929-30, 1935-36, 1938 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.21 ft (0.06 m) above datum, Feb. 26, 1936; lowest measured, 16.38 ft (4.99 m) below datum, Sept. 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	5.80	-	-	-	-	-	-

CLACKAMAS COUNTY

451905122475801. Local number 3S/1W-10ccd.
LOCATION.--Lat 45°19'05", long 122°47'58", Hydrologic Unit 17090007.
Owner: Pamouskis.
AQUIFER.--Columbia River Basalt Group.
WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), reported depth 115 ft (35 m).
DATUM.--Altitude of land surface datum is 235 ft (72 m). Measuring point: Top of casing extension, 1.45 ft (0.44 m) above datum.
PERIOD OF RECORD.--1951 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 68.42 ft (20.85 m) below datum, May 12, 1956; lowest measured 91.26 ft (27.82 m) below datum, Oct. 17, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	90.25	JAN 27	87.23	APR 13	84.05	-	-

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CROOK COUNTY

442100120541701. Local number 14S/15E-15dcc.
LOCATION.--Lat 44°21'00", long 120°54'48", Hydrologic Unit 17070305.
Owner: Williams.
AQUIFER.--Sand and gravel.
WELL CHARACTERISTICS.--Drilled domestic and stock well, diam 4 in (100 mm), depth 210 ft (64 m).
DATUM.--Land surface datum is 2,846.8 ft (867.7 m) National Geodetic Vertical Datum of 1929. Measuring point: Center of pressure gage, 6.50 ft (1.98 m) above datum.
PERIOD OF RECORD.--1944 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 75.5 ft (23.0 m) above datum, Mar. 12, 1964; lowest measured, 34.5 ft (10.5 m) above datum, May 13, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

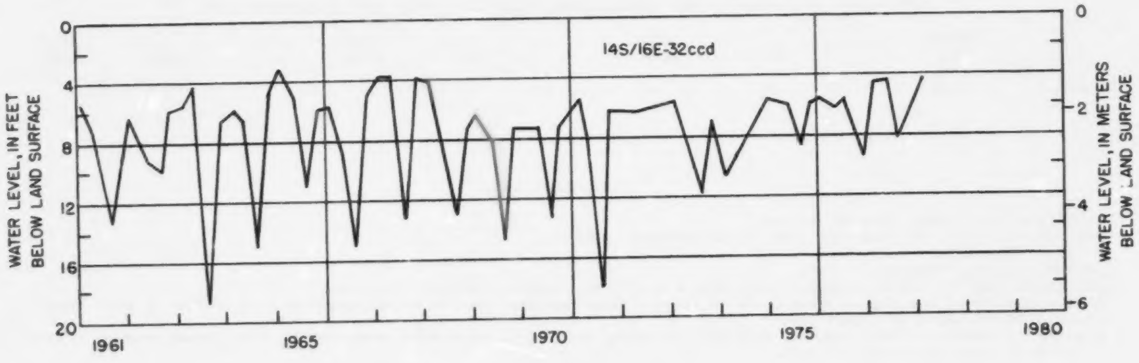
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 19	+41½	FEB 17	+44	MAY 12	+37	-	-

442029120504801. Local number 14S/16E-19add.
LOCATION.--Lat 44°20'29", long 120°50'48", Hydrologic Unit 17070305.
OWNER: Leslie Clausen.
AQUIFER.--Sandy material.
WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 47 ft (14 m).
DATUM.--Altitude of land surface datum is 2,970 ft (905 m). Measuring point: Top of casing, 1.50 ft (0.46 m) below datum.
REMARKS.--Measurement discontinued.
PERIOD OF RECORD.--1944, 1947 to 1977.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.93 ft (0.28 m) below datum, Aug. 13, 1965; lowest measured, 21.22 ft (6.47 m) below datum, Apr. 28, 1961.

441819120503301. Local number 14S/16E-32ccd.
LOCATION.--Lat 44°18'19", long 120°50'33", Hydrologic Unit 17070305.
Owner: Olen Ford.
AQUIFER.--Sand and gravel.
WELL CHARACTERISTICS.--Drilled unused artesian well, diam 5 in (130 mm), depth (160 ft (49 m).
DATUM.--Land surface datum is 2,865.90 ft (873.53 m) National Geodetic Vertical Datum of 1929. Measuring point: Hole in casing, 1.70 ft (0.52 m) above datum.
REMARKS.--Hydrograph revised for measurements shown in years 1968 and 1975.
PERIOD OF RECORD.--1944 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.82 ft (0.56 m) above datum, Dec. 8, 1945; lowest measured, 21.36 ft (6.51 m) below datum, Aug. 8, 1958.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 17	4.32	-	-	-	-	-	-

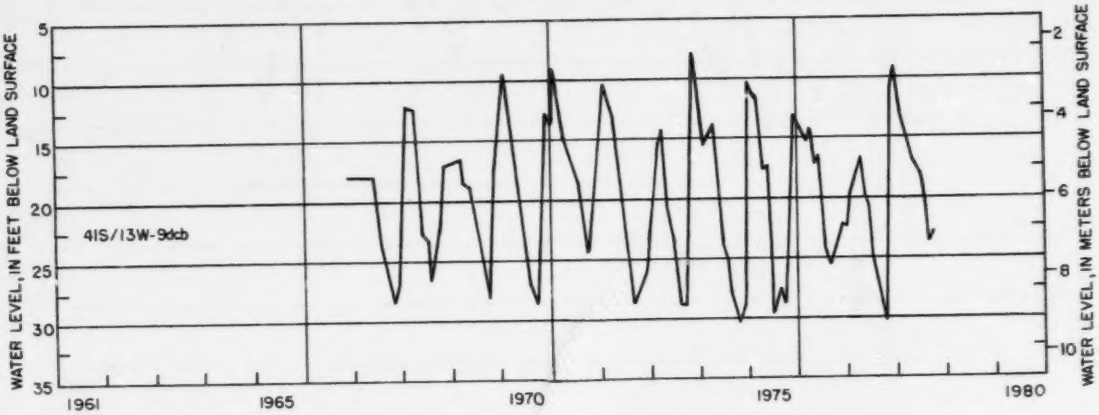


CURRY COUNTY

420205124145501. Local number 41S/13W-9dcb.
LOCATION.--Lat 42°02'05", long 124°14'55", Hydrologic Unit 17100312.
Owner: Minnie Clendenin.
AQUIFER.--Sandstone and gravel.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 10 in (250 mm), depth 59 ft (18 m), cased to 45 ft (14 m), perforated 30-45 ft (9-14 m).
DATUM.--Altitude of land surface datum is unknown. Measuring point: Top of casing 0.9 ft (0.9 m) above datum.
PERIOD OF RECORD.--1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.42 ft (2.26 m) below datum, Jan. 30, 1970; lowest measured, 30.52 ft (9.30 m) below datum, Sept. 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	10.86	JAN 18	12.98	JUN 2	18.40	AUG 10	23.93
DEC 6	8.87	APR 21	17.13	JUL 6	20.59	SEP 5	23.57



DESCHUTES COUNTY

434400121275001. Local number 21S/11E-19ccc.
LOCATION.--Lat 43°44'01", long 121°27'57", Hydrologic Unit 17070302.
Owner: Inez Kellems.
AQUIFER.--Sand and gravel.
WELL CHARACTERISTICS.--Dug domestic and stock well, diam 6 in (150 mm) depth 100 ft (30 m), cased to 70 ft (21 m).
DATUM.--Altitude of land surface datum is about 4,220 ft (1,286 m). Measuring point: Top of casing, 0.20 ft (0.06 m) above datum.
PERIOD OF RECORD.--1945, 1948 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.90 ft (3.32 m) below datum, Aug. 14, 1956; lowest measured, 41.63 ft (12.69 m) below datum Oct. 23, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

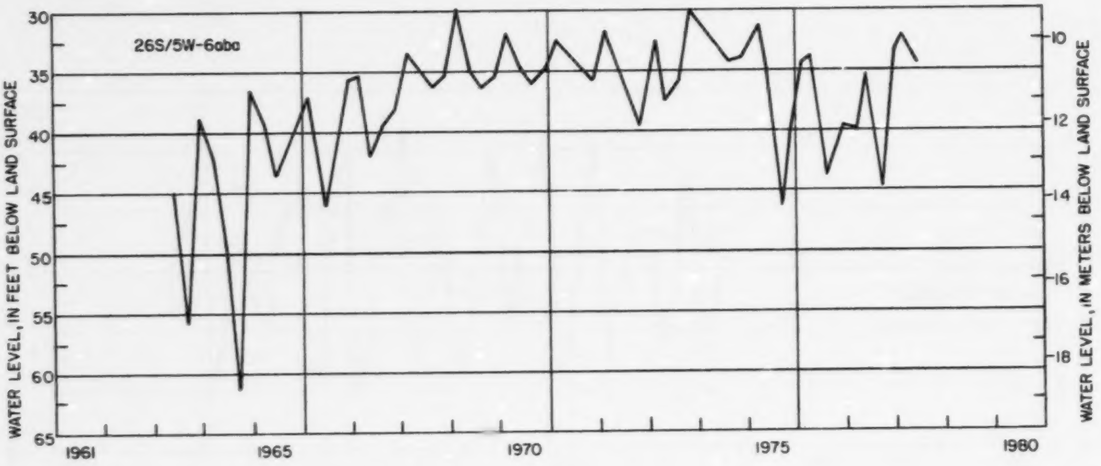
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	20.80	JAN 19	25.59	APR 21	24.44	-	-

DOUGLAS COUNTY

432051123195601. Local number 26S/5W-6aba.
LOCATION.--Lat 43°20'51", long 123°19'56", Hydrologic Unit 17100301.
Owner: Stanley Mohr.
AQUIFER.--Sandstone and siltstone.
WELL CHARACTERISTICS.--Drilled domestic well, diam 8 in (200 mm), depth 225 ft (69 m), cased to 20 ft (6 m).
DATUM.--Altitude of land surface datum is 580 ft (177 m). Measuring point: Hole in casing seal, 0.7 ft (0.21 m) above datum.
PERIOD OF RECORD.--1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.15 ft (9.19 m) below datum, Feb. 13, 1969; lowest measured, b61.19 ft (18.65 m) below datum, Sept. 10, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 13	33.67	FEB 23	32.40	JUN 1	34.05	-	-

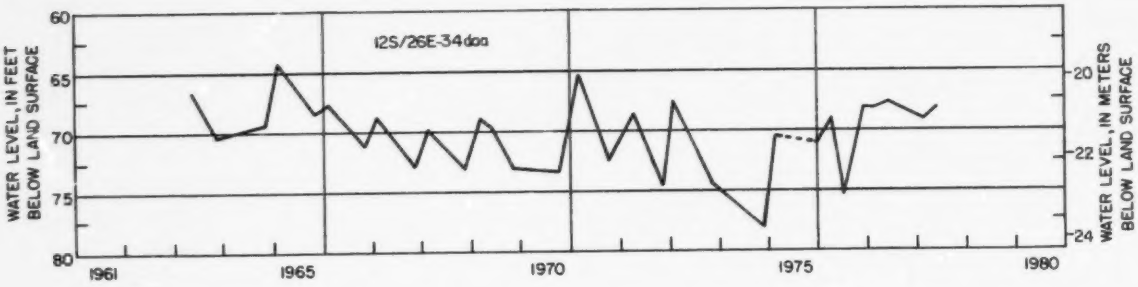


GRANT COUNTY

442845119343001. Local number 12S/26E-34daa.
LOCATION.--Lat 44°28'59", long 119°34'25", Hydrologic Unit 17070201.
Owner: Dayville Cemetery.
AQUIFER.--Tuffaceous sand and gravel.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 6 in (150 mm), depth 477 ft (145 m), cased to 222 ft (68 m), perforated 177-222 ft (54-68 m).
DATUM.--Altitude of land surface datum is about 2,340 ft (713 m). Measuring point: Top hole in casing seal 1.50 ft (0.5 m) below datum.
PERIOD OF RECORD.--1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 64.33 ft (19.61 m) below datum, Feb. 19, 1965; lowest measured 78.14 ft (23.82 m) below datum, Nov. 15, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

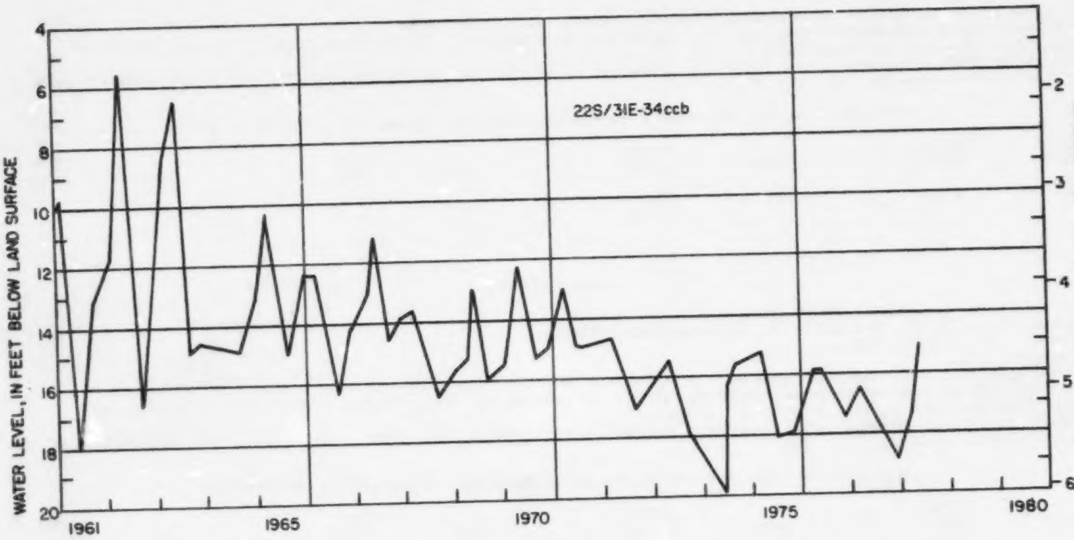
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 17	68.43	MAY 11	67.86	-	-	-	-



433701118595401. Local number 22S/31E-34ccb.
LOCATION.--Lat 43°37'01", long 118°59'54", Hydrologic Unit 17120001.
Owner: Jay Hoyt.
AQUIFER.--Volcanic or sedimentary rock.
WELL CHARACTERISTICS.--Drilled stock well, diam 18 to 8 in (460 to 200 mm), depth 288 ft (88 m), cased to 68 ft (21 m).
DATUM.--Land surface datum is 4,153.17 ft (1,265.89 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of well cover, 1.00 ft (0.30 m) above datum.
REMARKS.--Hydrograph revised for measurements shown from 1970 through 1975.
PERIOD OF RECORD.--1936 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.50 ft (0.46 m) below datum, Apr. 21, 1936; lowest measured, 19.82 ft (6.04 m) below datum, June 6, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 16	18.90	MAR 2	17.28	MAY 24	15.05	-	-



433527118560502. Local number 23S/32E-7cab.
LOCATION.--Lat 43°35'27", long 118°56'05", Hydrologic Unit 17120001.
Owner: Dorland Ray.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 18 in (460 mm), depth 93 ft (28 m), cased to 60 ft (18 m).
DATUM.--Land surface datum is 4,135.24 ft (1,260.42 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.36 ft (0.11 m) below datum.
PERIOD OF RECORD.--1928 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.07 ft (0.63 m) below datum, May 19, 1965; lowest measured, 38.37 ft (11.70 m) below datum, July 30, 1931.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17	13.24	MAY 25	5.72	-	-	-	-

HARNEY COUNTY

431551118381001. Local number 26S/33E-34cca.
LOCATION.--Lat 43°15'51", long 118°38'10", Hydrologic Unit 17120001.
Owner: Davis Farms.
AQUIFER.--Cinders.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 14 in (350 mm), depth 81 ft (25 m), cased to 30 ft (9 m).
DATUM.--Altitude of land surface datum is 4,120 ft (1,256 m). Measuring point: Top of casing, 0.50 ft (0.15 m) above datum.
PERIOD OF RECORD.--1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.10 ft (5.82 m) below datum, Mar. 23, 1978; lowest measured, 22.10 ft (6.74 m) below datum, Mar. 9, 1967.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 16	20.80	MAR 23	19.10	JUL 5	20.98	SEP 14	21.05

425400118205001. Local number 31S/35E-1bb.
LOCATION.--Lat 42°54'00", long 118°20'50", Hydrologic Unit 17120009.
Owner: Fred Pallock.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Drilled domestic well, diam 8 in (200 mm), depth 32 ft (10 m).
DATUM.--Altitude of land surface datum is 4,270 ft (1,302 m). Measuring point: Top of casing, 0.50 ft (0.15 m) above datum.
PERIOD OF RECORD.--1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.35 ft (0.72 m) below datum, Aug. 20, 1975; lowest measured, 18.12 ft (5.52 m) below datum, Nov. 20, 1963, May 21, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

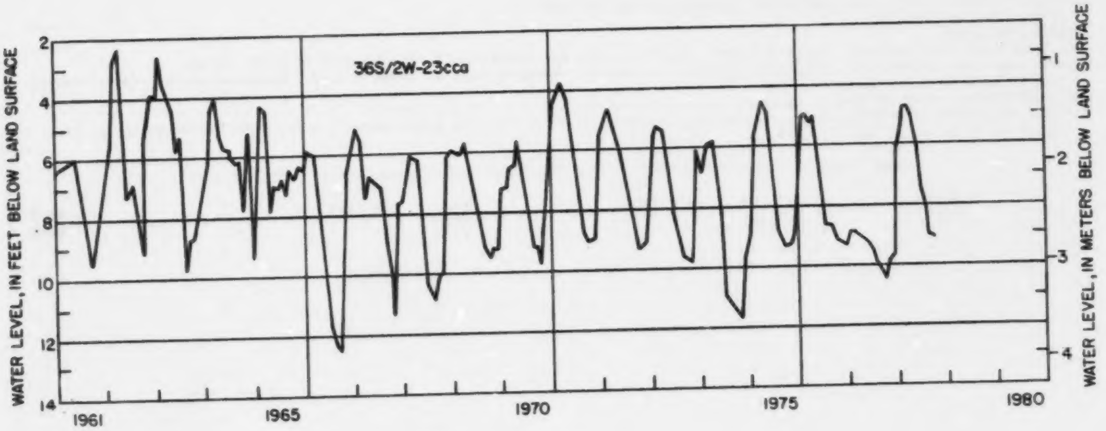
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 16	11.40	MAR 1	10.34	MAY 24	9.30	-	-

JACKSON COUNTY

422517122543401. Local number 36S/2W-23cca.
LOCATION.--Lat 42°25'17", long 122°54'34", Hydrologic Unit 17100308.
Owner: U.S. Geological Survey.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Drilled observation well, diam 8 in (200 mm), depth 110 ft (33 m), cased to 106 ft (32 m).
DATUM.--Altitude of land surface datum is 1,230 ft (375 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above datum.
PERIOD OF RECORD.--1953-54, 1956, 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.27 ft (0.69 m) below datum, Mar. 5, 1962; lowest measured, 12.47 ft (3.80 m) below datum, Sept. 23, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	9.89	JAN 20	5.33	APR 20	5.01	JUL 20	8.16
NOV 18	9.68	FEB 21	4.62	MAY 18	6.28	AUG 21	9.00
DEC 20	6.05	MAR 20	4.62	JUN 21	7.41	SEP 20	9.11



KLAMATH COUNTY

425908121505501. Local number 30S/7E-11dab.
LOCATION.--Lat 42°59'08", long 121°50'55", Hydrologic Unit 18010201.
Owner: Crown Zellerbach Corp.
WELL CHARACTERISTICS.--Drilled industrial well, diam 6 in (150 mm), depth 123 ft (37 m).
DATUM.--Altitude of land surface datum is 4,610 ft (1,405 m). Measuring point: Top of casing, 0.40 ft (0.12 m) above datum.
PERIOD OF RECORD.--1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 48.98 ft (14.93 m) below datum, July 26, 1974; lowest measured, 76.61 ft (23.35 m) below datum, Nov. 4, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	72.23	-	-	-	-	-	-

423832121524801. Local number 34S/7E-9adb.
LOCATION.--Lat 42°38'32", long 121°52'48", Hydrologic Unit 18010201.
Owner: State of Oregon.
AQUIFER.--Basalt.
WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 221 ft (67 m), cased to 43 ft (13 m).
DATUM.--Altitude of land surface datum is 4,220 ft (1,286 m). Measuring point: Bolt above top of casing, 4.86 ft (1.48 m) below datum.
PERIOD OF RECORD.--1955 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.49 ft (5.64 m) below datum, Jan. 31, 1975; lowest measured, 26.87 ft (8.19 m) below datum, Apr. 30, 1976

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 3	19.97	APR 28	19.92	JUL 28	a28.80	-	-

a Well being pumped.

423408121430901. Local number 35S/8E-1bcc.
LOCATION.--Lat 42°34'08", long 121°43'09", Hydrologic Unit 18010202.
Owner: H.G. Wolff.
WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 102 ft (31 m).
DATUM.--Altitude of land surface datum is 4,305 ft (1,312 m). Measuring point: Top of casing 0.50 ft (0.15 m) above datum.
PERIOD OF RECORD.--1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.45 ft (0.44 m) below datum, Apr. 8, 1956; lowest measured, 17.00 ft (5.18 m) below datum, July 27, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	17.14	FEB 1	2.91	APR 25	3.80	JUL 26	6.98

423131121340801. Local number 35S/10E-19aca.
LOCATION.--Lat 42°31'31", long 121°34'08", Hydrologic Unit 18010202.
Owner: Wolfe Butte Ranch.
AQUIFER.--Volcanic rock.
WELL CHARACTERISTICS.--Drilled domestic well, diam, 6 in (150 mm), depth 360 ft (110 m), cased to 70 ft (21 m).
DATUM.--Altitude of land surface datum is 4,300 ft (1,311 m). Measuring point: Top of casing, 0.50 ft (0.15 m), above datum.
PERIOD OF RECORD.--1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.98 ft (2.13 m) below datum, Apr. 18, 1956; lowest measured, 40.72 ft (12.41 m) below datum, July 24, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	11.61	FEB 1	8.95	APR 26	7.02	JUL 26	10.12

KLAMATH COUNTY--Continued

422642121160901. Local number 36S/12E-14ccb.
LOCATION.--Lat 42°26'42", long 121°16'09", Hydrologic Unit 18010202.
Owner: Jim Godowa.
AQUIFER.--Sand and gravel.
WELL CHARACTERISTICS.--Drilled unused well, diam 6 in (150 mm), depth 48 ft (15 m).
DATUM.--Altitude of land surface datum is 4,345 ft (1,324 m). Measuring point: Top of casing, 1.50 ft (0.46 m) below datum.
PERIOD OF RECORD.--1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.71 ft (0.22 m) below datum, July 17, 1973; lowest measured, 6.64 ft (2.02 m) below datum, Aug. 26, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	2.88	FEB 1	1.88	APR 26	1.75	JUL 26	3.39

421920121400001. Local number 37S/10E-29dbb2.
LOCATION.--Lat 42°19'20", long 121°40'00", Hydrologic Unit 18010204.
Owner: Edgewood Ranch.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Drilled stock well, diam 18 in (460 mm), depth 800 ft (244 m), cased to 20 ft (6.1 m).
DATUM.--Altitude of land surface datum is 4,186 ft (1,276 m). Measuring point: Top of casing, at datum.
PERIOD OF RECORD.--1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.78 ft (6.33 m) below datum, Apr. 17, 1958; lowest measured, 31.97 ft (9.74 m) below datum, Oct. 20, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	31.97	FEB 2	30.53	APR 27	29.11	JUL 27	29.28

421630121392701. Local number 38S/10E-9cbc.
LOCATION.--Lat 42°16'30", long 121°39'27", Hydrologic Unit 18010204.
Owner: Underwood Ranch.
AQUIFER.--Basalt.
WELL CHARACTERISTICS.--Drilled stock well, diam 6 in (150 mm), depth 135 ft (41 m), cased to 25 ft (8 m).
DATUM.--Altitude of land surface datum is 4,210 ft (1,283 m). Measuring point: Top of casing, 0.70 ft (0.21 m) above datum.
PERIOD OF RECORD.--1949-1972, 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 107.55 ft (32.78 m) below datum; lowest measured, 121.71 ft (37.10 m) below datum, July 28, 1977.

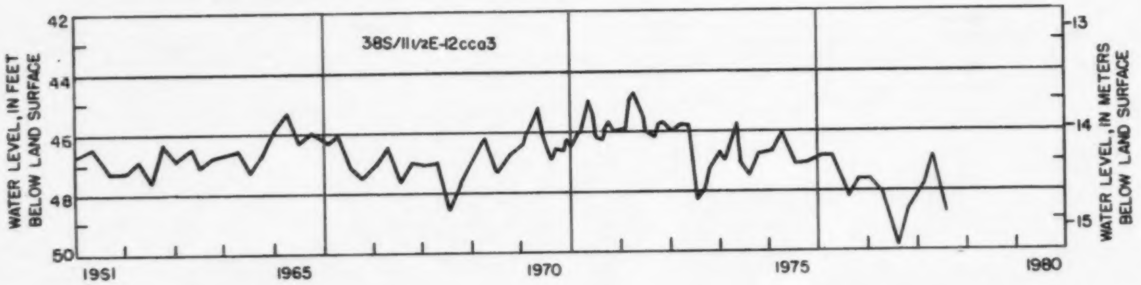
WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	115.27	FEB 2	113.87	APR 27	111.15	JUL 27	118.25

421710121285001. Local number 38S/11½E-12cca3.
LOCATION.--Lat 42°17'10", long 121°28'50", Hydrologic Unit 18010204.
Owner: Frank Challis.
AQUIFER.--Red porous lava rock.
WELL CHARACTERISTICS.--Drilled unused well, diam 12 in (300 m), depth 150 ft (46 m), cased to 5 ft (1.5 m).
DATUM.--Altitude of land surface datum is 4,161 ft (1,268 m). Measuring point: Top of casing, at datum.
PERIOD OF RECORD.--1949 to current year, continuous recording gage installed May 12, 1970, removed June 12, 1975.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.02 ft (13.42 m) below datum, Aug. 6, 1958; lowest measured, 49.82 ft (15.19 m) below datum, July 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	48.69	FEB 2	47.84	APR 27	46.94	JUL 27	48.87



421605121290501. Local number 38S/11½E-13ccc.
LOCATION.--Lat 42°16'05", long 121°29'05", Hydrologic Unit 18010204.
Owner: Herman Pendegraft.
AQUIFER.--Cinders.
WELL CHARACTERISTICS.--Drilled unused well, diam 20 in (510 mm), depth 600 ft (183 m), cased to 16 ft (4.9 m).
DATUM.--Altitude of land surface datum is 4,152 ft (1,266 m. Measuring point: Top south side of casing, 0.42 ft (0.13 m) above datum.
PERIOD OF RECORD.--1948 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.54 ft (5.65 m) below datum, Jan. 28, 1965; lowest measured, 29.53 ft (9.00 m) below datum, Oct. 16, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	25.10	FEB 2	21.53	APR 27	19.19	JUL 27	22.62

421612121302501. Local number 38S/11½E-15dda.
LOCATION.--Lat 42°16'12", long 121°30'25", Hydrologic Unit 18010204.
Owner: George McCollum.
AQUIFER.--Lava rock and cinders.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 12 in (300 mm), depth 495 ft (151 m).
DATUM.--Altitude of land surface datum is 4,185 ft (1,276 m). Measuring point: Airline hole in pumpbase, 1.05 ft (0.32 m) above datum.
PERIOD OF RECORD.--1948, 1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 71.26 ft (21.72 m) below datum, Apr. 24, 1975; lowest measured, 81.55 ft (24.86 m) below datum, July 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	80.15	FEB 2	79.71	APR 27	78.78	JUL 27	a85.80

a Well being pumped.

421431121340401. Local number 38S/11½E-30dac.
LOCATION.--Lat 42°14'31", long 121°34'04", Hydrologic Unit 18010204.
Owner: George McCollum.
AQUIFER.--Broken lava rock and cinders.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 14 in (350 mm), depth 175 ft (53 m), cased to 120 ft (37 m).
DATUM.--Altitude of land surface datum is 4,217 ft (1,285 m). Measuring point: Top of hole in pumpbase, 1.00 ft (0.30 m) above datum.
PERIOD OF RECORD.--1948 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 99.94 ft (30.46 m) below datum, Apr. 17, 1958; lowest measured, 117.48 ft (35.81 m) below datum, Oct. 16, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	110.34	FEB 2	107.13	APR	105.40	JUL 27	109.00

420908121313701. Local number 39S/11½E-28ddd.
LOCATION.--Lat 42°09'08", long 121°31'37", Hydrologic Unit 18010204.
Owner: Lost River Ranch.
AQUIFER.--Diatomite.
WELL CHARACTERISTICS.--Drilled domestic and stock well, diam 6 in (150 mm), depth 460 ft (140 m), cased to 60 ft (18 m).
DATUM.--Altitude of land surface datum is 4,105 ft (1,251 m). Measuring point: Top south side of concrete curb, 0.30 ft (0.09 m) above datum.
PERIOD OF RECORD.--1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.50 ft (1.98 m) below datum, Aug. 25, 1955; lowest measured, 37.16 ft (11.33 mm) below datum, July 24, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	27.77	FEB 2	20.58	APR 27	20.00	JUL 27	a

a Well being pumped.

KLAMATH COUNTY--Continued

420919121190201. Local number 39S/12E-29dbc.
LOCATION.--Lat 42°09'19", long 121°19'02", Hydrologic Unit 18010204.
Owner: Otta Miller. Formerly Robert Vogel.
AQUIFER.--Basalt.
WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 88 ft (27 m).
DATUM.--Altitude of land surface datum is 4,140 ft (1,262 m). Measuring point: Top of casing, at datum.
PERIOD OF RECORD.--1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.34 ft (4.07 m) below datum, July 24, 1957; lowest measured, 25.46 ft (7.76 m) below datum, Feb. 18, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	22.38	FEB 2	23.45	JUL 27	17.59	-	-

420845121150601. Local number 39S/12E-35add.
LOCATION.--Lat 42°08'45", long 121°15'06", Hydrologic Unit 18010204.
Owner: Quentin Steele.
AQUIFER.--Basalt.
WELL CHARACTERISTICS.--Drilled domestic and stock well, diam 6 in (150 mm), depth 360 ft (110 m).
DATUM.--Altitude of land surface datum is 4,180 ft (1,274 m). Measuring point: Top of casing at datum.
PERIOD OF RECORD.--1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 33.26 ft (10.14 m) below datum, Aug. 5, 1958; lowest measured, 43.42 ft (13.23 m) below datum, May 2, 1961.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	a65.86	FEB 2	39.74	APR 27	40.25	JUL 27	39.20

a Well being pumped.

420623121293601. Local number 40S/11E-11bad.
LOCATION.--Lat 42°06'23", long 121°29'36", Hydrologic Unit 18010204.
Owner: A.W. Shaupp.
AQUIFER.--Basalt.
WELL CHARACTERISTICS.--Drilled irrigation and stock well, diam 12 in (300 mm), depth 992 ft (302 m).
DATUM.--Altitude of land surface datum is 4,150 ft (1,265 m). Measuring point: Top of ½-in (6 mm) hole in pumpbase flange, 0.60 ft (0.18 m) above datum.
PERIOD OF RECORD.--1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.38 ft (2.55 m) below datum, Apr. 7, 1956; lowest measured, 28.83 ft (8.79 m) below datum, July 22, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	20.98	FEB 2	18.84	APR 27	17.49	JUL 27	18.54

420232121241201. Local number 41S/12E-3cba.
LOCATION.--Lat 42°02'32", long 121°24'12", Hydrologic Unit 18010204.
Owner: Al Prescott.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Drilled domestic well, diam 4 in (100 mm), depth 76 ft (23 m).
DATUM.--Altitude of land surface datum is 4,110 ft (1,253 m). Top of casing, 0.30 ft (0.09 m) above datum.
PERIOD OF RECORD.--1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.75 ft (0.23 m) below datum, Feb. 18, 1955; lowest measured, 4.56 ft (1.39 m) below datum, July 24, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	3.05	FEB 1	2.78	APR 26	2.82	JUL 26	a

a Well being pumped.

KLAMATH COUNTY—Continued

415954121271501. Local number 41S/12E-19dcc.
LOCATION.--Lat 41°59'54", long 121°27'15", Hydrologic Unit 18010204.
Owner: Barney Hoyt.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Dug domestic and stock well, diam unknown, depth about 30 ft (9 m).
DATUM.--Altitude of land surface datum is 4,045 ft (1,233 m). Measuring point: Edge of concrete curb, 1.50 ft (0.46 m) below datum.
PERIOD OF RECORD.--1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.18 ft (0.97 m) below datum, May 3, 1961; lowest measured, 11.67 ft (3.56 m) below datum, June 11, 1960.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	6.55	FEB 1	4.95	APR 26	4.80	JUL 26	6.38

420124121122801. Local number 41S/14E-8cca.
LOCATION.--Lat 42°01'24", long 121°12'28", Hydrologic Unit 18010204.
Owner: Charles Kilgore.
AQUIFER.--Basalt fragments.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 16 to 12 in (410 to 300 mm), depth 210 ft (64 m), cased to 8 ft (2 m).
DATUM.--Altitude of land surface datum is 4,160 ft (1,268 m). Measuring point: Hole in pumpbase, 1.00 ft (0.30 m) above datum.
PERIOD OF RECORD.--1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.84 ft (4.52 m) below datum, Jan. 28, 1965; lowest measured, 21.12 ft (6.44 m) below datum, Apr. 25, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	18.55	FEB 2	17.64	APR 27	17.19	JUL 27	21.00

LAKE COUNTY

432435121015001. Local number 25S/14E-15bcc.
LOCATION.--Lat 43°24'35", long 121°01'50", Hydrologic Unit 17120005.
Owner: Al Soto.
AQUIFER.--Basalt.
WELL CHARACTERISTICS.--Drilled unused well, diam 18 in (460 mm), depth 220 ft (67 m).
DATUM.--Altitude of land surface datum is about 4,350 ft (1,326 m). Measuring point: Top of casing, at datum.
PERIOD OF RECORD.--1932, 1935-36, 1938 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.88 ft (12.46 m) below datum, Oct. 7, 1974; lowest measured, 52.88 ft (16.18 m) below datum Oct. 22, 1948.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	43.87	JAN 18	44.81	APR 20	43.67	-	-

431536120563901. Local number 27S/15E-4aca1.
LOCATION.--Lat 43°15'36", long 120°56'39", Hydrologic Unit 17120005.
Owner: M.Y. Parks.
AQUIFER.--Basaltic fragments.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 16 in (410 mm), depth 257 ft (78 m), cased to 14 ft (4 m).
DATUM.--Altitude of land surface datum is about 4,335 ft (1,321 m). Measuring point: Top of pumpbase flange, 2.00 ft (0.61 m) above datum.
PERIOD OF RECORD.--1932, 1935-36, 1938 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.30 ft (10.76 m) below datum, May 15, 1975; lowest measured, 37.60 ft (11.46 m) below datum, Aug. 27, 1970, Aug. 20, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	37.19	JAN 19	36.74	-	-	-	-

LAKE COUNTY--Continued

431547120380201. Local number 27S/18E-6bcb.
LOCATION.--Lat 43°15'47", long 120°38'02", Hydrologic Unit 17120005.
Owner: Rose T. Morici.
AQUIFER.--Sand.
WELL CHARACTERISTICS.--Drilled unused well, diam 8 in (200 mm), depth 83 ft (25 m), cased to 10 ft (3 m).
DATUM.--Altitude of land surface datum is about 4,317 ft (1,316 m). Measuring point: Top of casing, 0.50 ft (0.15 m) above datum.
PERIOD OF RECORD.--1940 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.94 ft (4.86 m) below datum, Oct. 8, 1974; lowest measured, 25.19 ft (7.68 m) below datum, Apr. 1, 1953.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	18.03	JAN 19	17.88	APR 21	17.35	-	-

431320120350001. Local number 27S/18E-21aaa.
LOCATION.--Lat 43°13'20", long 120°35'00", Hydrologic Unit 1712005.
Owner: Chewaucan Land & Cattle Co.
AQUIFER.--Basalt (?).
WELL CHARACTERISTICS.--Drilled abandoned oil-test well, diam 6½ in (165 mm), depth 635 ft (193 m).
DATUM.--Altitude of land surface datum is about 4,330 ft (1,320 m). Measuring point: Top of casing, at datum.
PERIOD OF RECORD.--1955 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.41 ft (8.05 m) below datum, Apr. 5, 1967; lowest measured, 28.53 ft (8.70 m) below datum, Nov. 6, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	28.35	JAN 19	27.70	APR 21	23.38	-	-

430508119582001. Local number 29S/23E-3dac.
LOCATION.--Lat 43°05'08", long 119°58'20", Hydrologic Unit 17120005.
Owner: U.S. Soil Conservation Service.
AQUIFER.--Basalt (?).
WELL CHARACTERISTICS.--Drilled stock well, diam 8 in (200 mm), depth 177 ft (54 m).
DATUM.--Altitude of land surface datum is about 4,225 ft (1,288 m). Measuring point: Top of casing collar, at datum.
PERIOD OF RECORD.--1945, 1947 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.42 ft (4.395 m) below datum, July 27, 1965; lowest measured, 19.62 ft (5.97 m) below datum, Apr. 23, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	17.81	JAN 31	17.81	JUL 25	17.95	-	-

423250119531501. Local number 35S/24E-9dbd.
LOCATION.--Lat 42°32'45", long 119°53'22", Hydrologic Unit 17120007.
Owner: U.S. Bureau of Land Management.
AQUIFER.--Basalt.
WELL CHARACTERISTICS.--Drilled well, diam 8 in (200 mm), depth 376 ft (115 m), cased to 22 ft (8 m).
DATUM.--Altitude of land surface datum is 4,470 ft (1,362 m).
REMARKS.--Hogback Well on Rabbit Hills SW quadrangle map.
PERIOD OF RECORD.--1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.17 ft (2.19 m) below datum, Feb. 1, 1966; lowest measured, 9.03 ft (2.75 m) below datum, Oct. 23, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	8.71	JAN 31	7.89	APR 25	7.46	JUL 25	8.70

422900120165201. Local number 36S/21E-6aba.
LOCATION.--Lat 42°29'02", long 120°16'54", Hydrologic Unit 17120006.
Owner: S.V. Carroll.
AQUIFER.--Sand.
WELL CHARACTERISTICS.--Dug unused well, size 8 x 8 ft (2.4 x 2.4 m), depth 21 ft (6 m), uncased.
DATUM.--Land surface datum is 4,321.6 ft (1,317.2 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of 1-in (25 mm) pipe, 4.50 ft (1.37 m) above datum.
PERIOD OF RECORD.--1938 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.27 ft (2.22 m) below datum, Apr. 11, 1972; lowest measured, 17.21 ft (5.25 m) below datum, Aug. 27, 1938.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	12.52	JAN 30	12.65	APR 24	12.68	JUL 24	12.65

LAKE COUNTY--Continued

422450119541101. Local number 36S/24E-28ccb.
LOCATION.--Lat 42°24'45", long 119°54'11", Hydrologic Unit 17120007.
Owner: Lloyd Grisel.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 40 ft (12 m).
DATUM.--Altitude of land surface datum is 4,508 ft (1,374 m). Measuring point: 0.50 ft (0.15 m) above datum.
PERIOD OF RECORD.--1948 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.17 ft (5.23 m) below datum, Apr. 12, 1959; lowest measured, 27.56 ft (8.40 m) below datum, Jan. 11, 1962.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	27.20	JAN 31	25.60	APR 25	18.97	JUL 25	20.31

421445119523001. Local number 38S/24E-27acb.
LOCATION.--Lat 42°14'55", long 119°52'28", Hydrologic Unit 17120007.
Owner: Charles Crump.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Drilled unused artesian well, diam 6 in (150 mm), depth 81 ft (25 m), cased to 60 ft (18 m).
DATUM.--Altitude of land surface datum is about 4,495 ft (1,370 m). Measuring point: Top of casing at datum.
PERIOD OF RECORD.--1948 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, flowing several times, 1952-58, 1963-66, 1969-71, 1973-76; lowest measured, 2.19 ft (0.67 m) below datum, Jan. 15, 1960.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

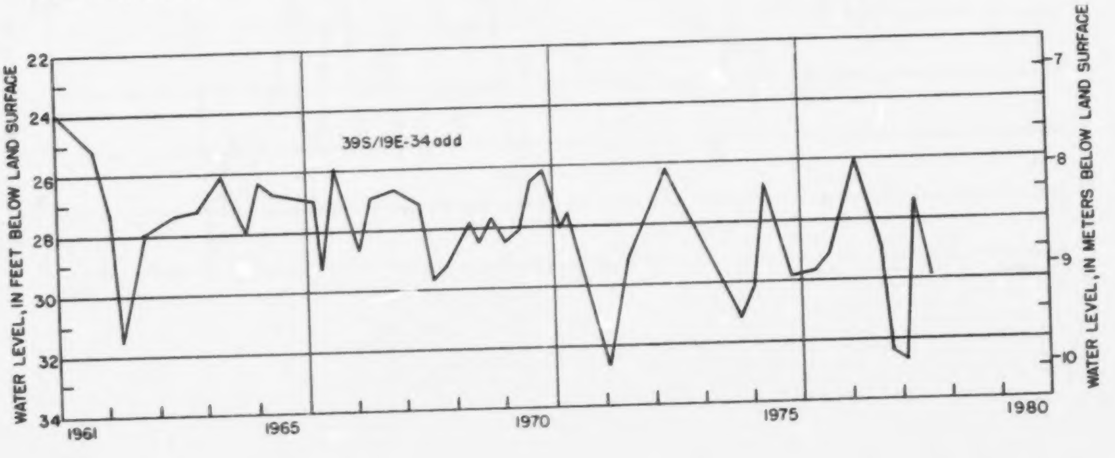
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	0.89	JAN 31	0.37	APR 25	Flowing	JUL 25	Flowing

420842120271301. Local number 39S/19E-34add.
LOCATION.--Lat 42°08'42", long 120°27'13", Hydrologic Unit 18020001.
Owner: Daryl Jamison.
WELL CHARACTERISTICS.--Drilled domestic and stock well, diam 6 in (150 mm), depth 110 ft (34 m), cased to 110 ft (34 m).
DATUM.--Altitude of land surface datum is 4,792 ft (1,461 m). Measuring point: Top of vent pipe, 2.00 ft (0.61 m) above datum.
PERIOD OF RECORD.--1960 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.78 ft (7.25 m) below datum, Oct. 13, 1960; lowest measured, b31.43 ft (9.58 m) below datum, May 1, 1962.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	a32.32	JAN 31	a32.53	APR 25	27.43	JUL 25	29.84

a Well being pumped.



LAKE COUNTY--Continued

421032119535802. Local number 39S/24E-21bdb.
LOCATION.--Lat 42°10'34", long 119°53'48", Hydrologic Unit 17120007.
Owner: E.G. & T.M. Sanford.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Drilled domestic well; diam 6 in (150 mm), depth 165 ft (50 m).
DATUM.--Altitude of land surface datum is about 4,580 ft (1,396 m). Measuring point: Top of Casing, 0.50 ft (0.15 m) above datum.
PERIOD OF RECORD.--1948 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.00 ft (2.74 m) below datum, July 23, 1974; lowest measured, 19.34 ft (5.90 m) below datum, Jan. 15, 1960.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	19.32	JAN 31	19.20	APR 25	18.39	JUL 25	a

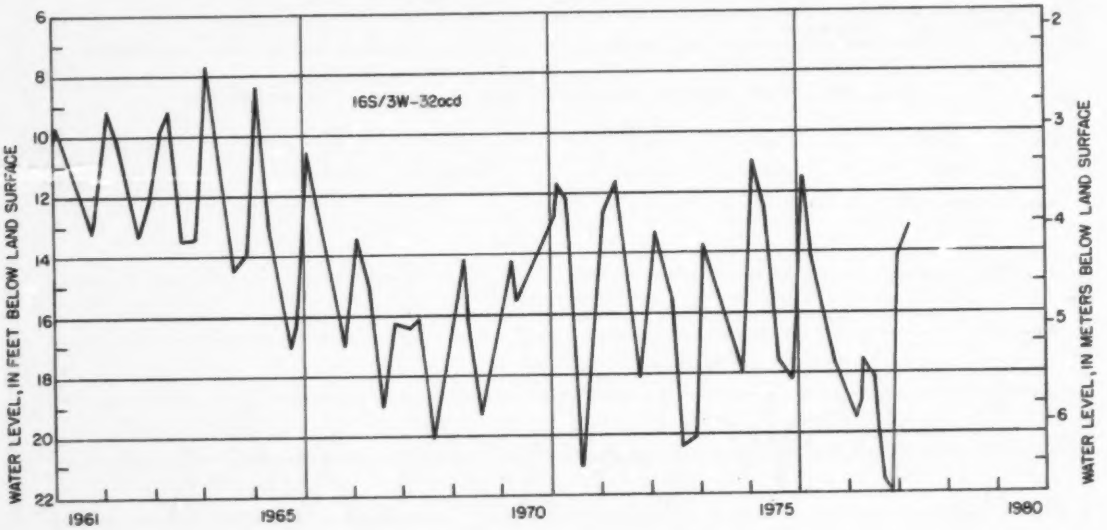
a Well being pumped.

LANE COUNTY

440803123042601. Local number 16S/3W-32acd.
LOCATION.--Lat 44°08'03", long 123°04'26", Hydrologic Unit 17090004.
Owner: Peter Gutowski.
AQUIFER.--Sand and gravel.
WELL CHARACTERISTICS.--Dug and drilled irrigation well in sand and gravel, diam 8 in (200 mm), depth 40 ft (12 m).
DATUM.--Land-surface datum is 388.98 ft (118.56 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 8.00 ft (2.44 m) below datum.
REMARKS.--Continuous water-level recorder installed Feb. 16, 1977.
PERIOD OF RECORD.--1928-30, 1935-36, 1938 to current year. Published every fifth day February 20 to September 20, 1977.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.53 ft (1.99 m) below datum, Jan. 16, 1936; lowest measured, 22.02 ft (6.67 m) below datum, Oct. 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	22.02	DEC 12	14.25	MAR 6	13.03	-	-

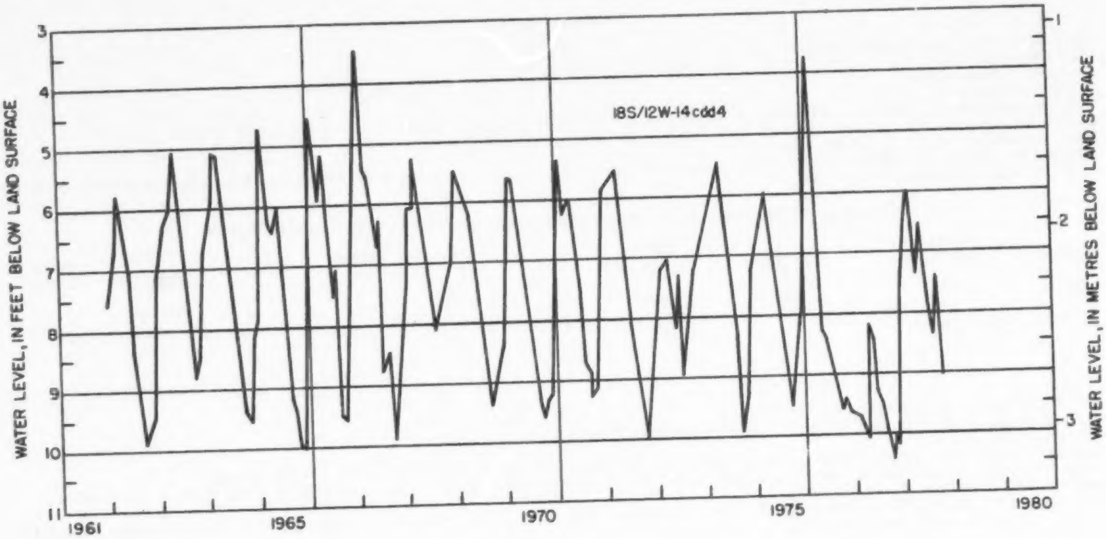


LANE COUNTY--Continued

440000124054004. Local number 18S/12W-14cdd4.
LOCATION.--Lat 44°00'01", long 124°05'40", Hydrologic Unit 17100206.
Owner: U.S. Geological Survey.
AQUIFER.--Sand.
WELL CHARACTERISTICS.--Drilled observation well, diam 6 in (150 mm), depth 59 ft (18 m), cased to 59 ft (18 m), screened 44-59 ft (13-18 m).
DATUM.--Altitude of land surface datum is 70 ft (21 m). Measuring point: Top of casing at datum.
PERIOD OF RECORD.--1960 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.44 ft (1.05 m) below datum, Jan. 31, 1967; lowest measured, 10.40 ft (3.17 m) below datum, Aug. 24, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	10.20	JAN 24	5.95	APR 23	6.50	JUL 21	8.47
NOV 24	7.60	FEB 21	6.50	MAY 23	7.34	AUG 24	7.37
DEC 22	6.40	MAR 24	7.40	JUN 23	7.90	SEP 22	9.04



LINN COUNTY

444300123072501. Local number 10S/4W-12bdd.
LOCATION.--Lat 44°42'58", long 123°07'25", Hydrologic Unit 17090003.
Owner: Henry Hoefer.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Drilled domestic well, diam 8 in (200 mm), depth 32 ft (10 m).
DATUM.--Land-surface datum is 185.74 ft (56.61 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.20 ft (0.98 m) above datum.
REMARKS.--Measurement discontinued.
PERIOD OF RECORD.--1928-30, 1935-36, 1938 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.62 ft (2.32 m) below datum, Jan. 14, 1936; lowest measured, dry, Aug. 2, Sept. 29, 1972, Oct. 15, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	15.77	APR 5	19.60	-	-	-	-

LINN COUNTY--Continued

442140123052501. Local number 14S/3W-7ddc.
LOCATION.--Lat 44°21'40", long 123°05'25", Hydrologic Unit 17090003.
Owner: H.H. Kirk.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 8 in (200 m), depth 123 ft (37 m), cased to 110 ft (34 m), perforated 35-110 ft (11-34 m).
DATUM.--Altitude of land surface datum is 288 ft (88 m). Measuring point: 0.55 ft (0.17 m) above datum.
PERIOD OF RECORD.--1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.59 ft (0.79 m) below datum, Apr. 4, 1963; lowest measured, is 13.30 ft (4.05 m) below datum, Oct. 11, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	12.03	JAN 16	4.09	APR 18	3.40	JUL 19	7.07
DEC 3	7.80	FEB 22	3.83	MAY 24	3.80	AUG 29	8.61
DEC 20	5.53	MAR 21	3.41	JUN 20	5.77	SEP 26	8.52

MALHEUR COUNTY

441710117472301. Local number 15S/40E-2ccb.
LOCATION.--Lat 44°17'11", long 117°47'22", Hydrologic Unit 17050119.
Owner: Rankin Crow.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 10 in (250 mm), depth 310 ft (94 m), cased to 170 ft (52 m).
DATUM.--Altitude of land surface datum is about 3,898.3 ft (1,188.2 m). Measuring point: 1.00 ft (0.30 m) above datum.
PERIOD OF RECORD.--1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.06 ft (9.47 m) below datum, Mar. 18, 1951; lowest measured, 57.10 ft (17.40 m) below datum, Nov. 5, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10	60.36	FEB 16	57.38	MAY 9	55.36	AUG 9	a

a Well being pumped.

440007117000401. Local number 18S/47E-17bbb.
LOCATION.--Lat 44°00'36", long 117°00'13", Hydrologic Unit 17050115.
Owner: Earl Weaver.
WELL CHARACTERISTICS.--Drilled domestic well, diam 3 in (80 mm), depth 135 ft (41 m), cased to 135 ft (41 m).
DATUM.--Altitude of land surface datum is about 2,180 ft (664 m). Measuring point: Top of casing, 0.95 ft (0.29 m) above datum.
PERIOD OF RECORD.--1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.91 ft (2.11 m) below datum, Sept. 9, 1952; lowest measured, 15.15 ft (4.62 m) below datum, Aug. 31, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	12.12	FEB 28	10.44	MAY 23	11.65	-	-

434450118044001. Local number 21S/38E-17dca.
LOCATION.--Lat 43°44'50", long 118°04'40", Hydrologic Unit 17050116.
Owner: Walter Bodkin.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Dug stock well, diam 12 in (300 mm), depth 14 ft (4.2 m) cribbed to bottom.
DATUM.--Altitude of land surface datum is about 2,960 ft (902 m). Measuring point: At land surface datum.
PERIOD OF RECORD.--1945-56, 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.07 ft (0.94 m) below datum, June 23, 1952; lowest measured, 11.33 ft (3.45 m) below datum, Feb. 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 14	8.00	FEB 27	9.44	MAY 22	5.95	-	-

MALHEUR COUNTY--Continued

430730118073001. Local number 28S/37E-23ddd.
LOCATION.--Lat 43°07'30", long 118°07'30", Hydrologic Unit 17050110.
Owner: Earl Obenchain.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Dug domestic well, diam 4 ft (1.2 m), depth 30 ft (9 m), cribbed with rock to bottom.
DATUM.--Altitude of land surface datum is about 4,060 ft (1,240 m). Measuring point: Top of south side of concrete casing, 1.85 ft (0.56 m) above datum.
PERIOD OF RECORD.--1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.95 ft (0.59 m) below datum, Mar. 8, 1967; lowest measured, 18.40 ft (5.61 m) below datum, Jan. 22, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 16	16.22	MAR 23	2.55	JUL 5	5.60	SEP 14	8.52

424639117510501. Local number 32S/40E-18acc.
LOCATION.--Lat 42°46'38", long 117°51'03", Hydrologic Unit 17050109.
Owner: Clarence J. Eckstein.
AQUIFER.--Volcanic rock.
WELL CHARACTERISTICS.--Drilled domestic and public-supply well, diam 6 in (150 mm), depth 358 ft (109 m), cased to 160 ft (49 m).
DATUM.--Altitude of land surface datum is about 3,930 ft (1,200 m). Measuring point: Hole in top of casing, 0.70 ft (0.21 m) above datum.
PERIOD OF RECORD.--1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 234.21 ft (71.39 m) below datum, Mar. 1, 1977; lowest measured, 243.89 ft (74.34 m) below datum June 4, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	a235.10	FEB 28	234.77	MAY 23	234.83	-	-

423527117522501. Local number 34S/39E-13cbc.
LOCATION.--Lat 42°35'27", long 117°52'25", Hydrologic Unit 17050109.
Owner: Civil Aeronautics Administration.
AQUIFER.--Basalt (?).
WELL CHARACTERISTICS.--Drilled observation well, diam 10 in (250 mm), depth 246 ft (75 m).
DATUM.--Altitude of land surface datum is 4,050 ft (1,234 m). Measuring point: Top of casing, at datum.
PERIOD OF RECORD.--1954-56, 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 193.53 ft (58.99 m) below datum, Aug. 19, 1975; lowest measured, 207.20 ft (63.15 m) below datum, Sept. 13, 1961.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	193.53	FEB 28	194.31	MAY 23	194.20	-	-

422504117515501. Local number 36S/41E-26dad.
LOCATION.--Lat 42°25'04", long 117°51'55", Hydrologic Unit 17050109.
Owner: U.S. Bureau of Land Management.
AQUIFER.--Basalt (?).
WELL CHARACTERISTICS.--Drilled unused well, diam 8 in (200 mm), depth 222 ft (68 m).
DATUM.--Altitude of land surface datum is 4,200 ft (1,280 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above datum.
PERIOD OF RECORD.--1961 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 194.07 ft (59.15 m) below datum, May 2, 1962; lowest measured, 219.12 ft (66.79 m) below datum, Nov. 16, 1971.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	209.27	FEB 28	209.51	MAY 23	209.39	-	-

MALHEUR COUNTY--Continued

420010117431001. Local number 41S/43E-19aa.
LOCATION.--Lat 42°00'10", long 117°43'10", Hydrologic Unit 16040201.
Owner: Victor Albisu.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 98 ft (30 m).
DATUM.--Altitude of land surface datum is 4,420 ft (1,347 m). Measuring point: Top of casing, 5.35 ft (1.63 m) below datum.
PERIOD OF RECORD.--1955 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.23 ft (3.73 m) below datum, Sept. 19, 1972; lowest measured, 32.11 ft (9.79 m) below datum, Aug. 23, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	16.54	FEB 28	15.35	MAY 23	13.32	-	-

MARION COUNTY

451232122462301. Local number 4S/1W-23acc.
LOCATION.--Lat 45°12'32", long 122°46'23", Hydrologic Unit 17090009.
Owner: Donald Olmstead.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Dug unused well, diam 4 ft (1.2 m), depth 60 ft (18 m), cribbed with brick to bottom.
DATUM.--Altitude of land surface datum is about 180 ft (55 m). Measuring point: Top of concrete well cover, 0.50 ft (0.15 m) above datum.
PERIOD OF RECORD.--1945 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.78 ft (13.65 m) below datum, June 7, 1961; lowest measured, dry, Oct. 18, 1967, Apr. 16, July 17, Oct. 15, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	Dry	JAN 24	Dry	APR 11	Dry	-	-

451530122563101. Local number 4S/2W-4bab.
LOCATION.--Lat 45°15'30", long 122°56'31", Hydrologic Unit 17090007.
Owner: Dorety Real Estate.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Dug domestic well, diam 36 in (910 mm), depth 23 ft (7 m), cribbed with concrete tile to bottom.
DATUM.--Land surface datum is 123.57 ft (37.66 m) National Geodetic Vertical Datum of 1929. Measuring point: Edge of concrete curb, 1.80 ft (0.55 m) above datum.
PERIOD OF RECORD.--1928-30, 1935-36, 1938 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.60 ft (0.49 m) below datum, Dec. 21, 1955; lowest measured, 19.90 ft (6.07 m) below datum, Dec. 5, 1939.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

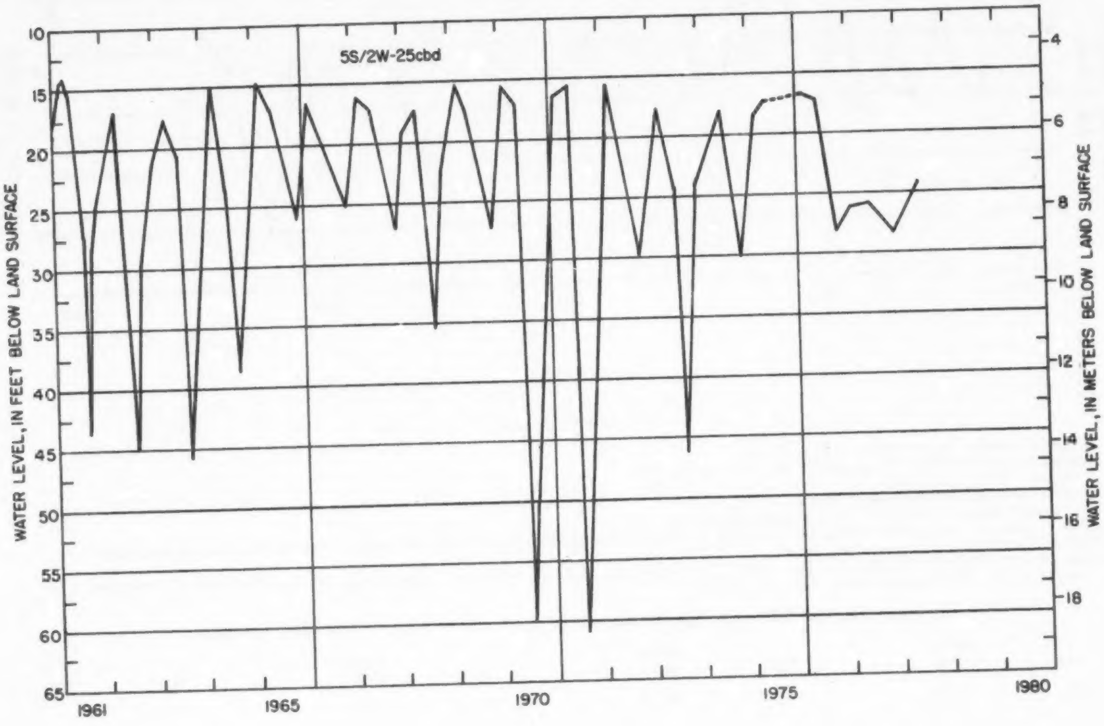
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 8	16.15	FEB 8	7.96	MAY 2	11.30	-	-

450620122530501. Local number 5S/2W-25cbd.
LOCATION.--Lat 45°06'20", long 122°52'58", Hydrologic Unit 17090009.
Owner: Agricultural Research Corp. (Sam H. Brown).
AQUIFER.--Sand and gravel.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 18 to 6 in (460 to 150 mm), depth 252 ft (77 m), casing perforated 117-147 ft (36-45 m), 215-245 ft (65-75 m).
DATUM.--Land surface datum is 180.31 ft (54.96 m) National Geodetic Vertical Datum of 1929. Measuring point: Top edge of seal around pump column, 0.65 ft (0.20 m) below datum.
PERIOD OF RECORD.--1929-30, 1935-36, 1938 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.74 ft (4.19 m) below datum, Mar. 11, 1948; lowest measured, b/ 61.03 ft (18.60 m) below datum, Aug. 3, 1971.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 8	28.28	MAY 2	24.28	-	-	-	-

b May be affected by recent pumping.

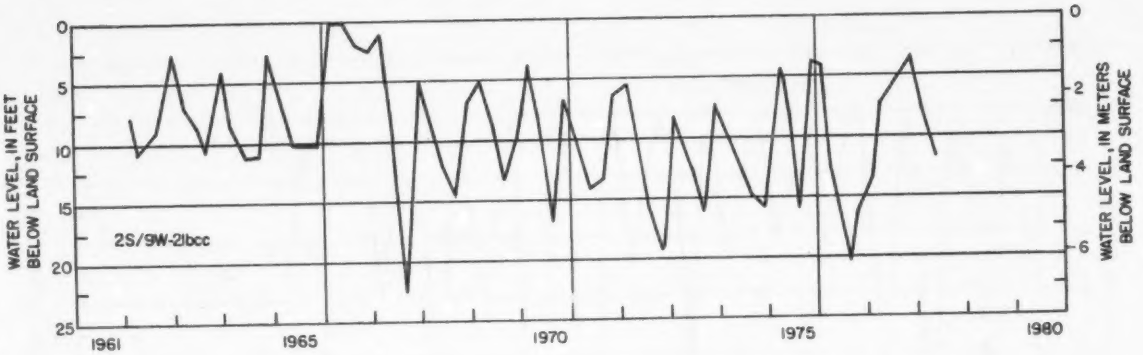


TILLAMOOK COUNTY

452300123481501. Local number 2S/9W-21bcc.
LOCATION.--Lat 45°23'03", long 123°48'08", Hydrologic Unit 17100203.
Owner: Vern Darby.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 128 ft (39 m).
DATUM.--Altitude of land surface datum is about 120 ft (37 m). Measuring point: Top of casing, at datum.
PERIOD OF RECORD.--1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, flowing, Feb. 21, 1966; lowest measured, 22.89 ft (6.98 m) below below datum, Aug. 2, 1967.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	3.67	FEB 22	7.63	MAY 31	11.60	-	-



UMATILLA COUNTY

453730119042501. Local number 2N/30E-28bdc.
LOCATION.--Lat 45°37'35", long 119°04'25", Hydrologic Unit 17070103.
Owner: Cunningham Sheep Co.
AQUIFER.--Columbia River Basalt Group.
WELL CHARACTERISTICS.--Drilled unused well, diam 6 in (150 mm), depth 81 ft (25 m).
DATUM.--Altitude of land surface datum is 1,440 ft (439 m). Measuring point: Top of casing, 0.40 ft (0.12 m) above datum.
PERIOD OF RECORD.--1953 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 58.93 ft (17.96 m) below datum, May 10, 1978; lowest measured, 68.28 ft (20.81 m) below datum, Sept. 19, 1958.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAk OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 7	59.10	FEB 15	59.16	MAY 10	58.93	-	-

454639118330901. Local number 3N/34E-3bac.
LOCATION.--Lat 45°46'25", long 118°33'08", Hydrologic Unit 17070103.
Owner: Berkley Davis.
AQUIFER.--Columbia River Basalt Group.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 12 in (300 mm), depth 1,263 ft (385 m), deepened from 298 ft (91 m) in 1972; cased to 60 ft (18 m).
DATUM.--Altitude of land surface datum is 1,544 ft (471 m). Measuring point: Center of air gage, 1.90 ft (0.58 m) above datum.
PERIOD OF RECORD.--1953 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4 ft (1.5 m) below datum, May 2, 1954; lowest measured, 130.5 ft (39.8 m) below datum, Oct. 27, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 8	124.32	FEB 15	105.66	MAY 11	85.55	-	-

UMATILLA COUNTY--Continued

455120118470501. Local number 4N/32E-2cbb.
LOCATION.--Lat 45°51'20", long 118°46'55", Hydrologic Unit 17070103.
Owner: L.F. King.
AQUIFER.--Columbia River Basalt Group.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 10 in (250 mm), reported depth 527 ft (161 m).
DATUM.--Altitude of land surface datum is 1,650 ft (503 m). Measuring point: Hole in pumpbase, at datum.
PERIOD OF RECORD.--1953 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11 ft (3 m) below datum, Aug. 26, 1953; lowest measured, b/ 60.85 ft (18.50 m) below datum, Aug. 25, 1959.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 8	15.90	FEB 16	14.05	MAY 11	13.45	-	-

b May be affected by recent pumping.

455425119182001. Local number 5N/28E-22bba.
LOCATION.--Lat 45°54'25", long 119°18'08", Hydrologic Unit 17070101.
Owner: L.J. Martin.
AQUIFER.--Columbia River Basalt Group.
WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 189 ft (58 m), cased to 8 ft (2.4 m).
DATUM.--Altitude of land surface datum is 440 ft (134 m). Measuring point: Top of casing, at datum.
PERIOD OF RECORD.--1953 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.39 ft (1.34 m) below datum, Feb. 15, 1965; lowest measured, 23.96 ft (7.30 m) below datum, Aug. 4, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 8	b68.86	FEB 15	29.94	MAY 10	63.55	-	-

b May be affected by recent pumping.

455420118334001. Local number 5N/34E-16ddc.
LOCATION.--Lat 45°54'18", long 118°33'40", Hydrologic Unit 17070102.
Owner: R.M. Thompson.
AQUIFER.--Basalt.
WELL CHARACTERISTICS.--Drilled domestic and stock well, diam 6 in (150 mm), depth 228 ft (69 m).
DATUM.--Altitude of land surface datum is 2,130 ft (649 m). Measuring point: Top of hole in sanitary seal, 0.50 ft (0.15 m) above datum.
PERIOD OF RECORD.--1953 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 139.91 ft (42.64 m) below datum, Feb. 17, 1977; lowest measured, b/ 162.50 ft (49.53 m) below datum, Nov. 30, 1956.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 8	140.03	FEB 16	140.24	MAY 11	142.71	-	-

455652118230001. Local number 5N/35E-1bad.
LOCATION.--Lat 45°56'52", long 118°23'00", Hydrologic Unit 17070102.
Owner: W. Bingman.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Dug irrigation well, size 6 x 8 ft (1.8 x 2.4 m), depth 37 ft (11 m), curbed with wood.
DATUM.--Land surface datum is 995.60 ft (303.46 m) National Geodetic Vertical Datum of 1929. Measuring point: At datum.
PERIOD OF RECORD.--1933 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.22 ft (4.03 m) below datum, Dec. 19, 1946; lowest measured, 35.43 ft (10.80 m) below datum, Feb. 16, 1937.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	24.36	FEB 21	23.60	MAY 20	25.02	AUG 21	26.67
DEC 20	23.50	MAR 21	23.50	JUN 20	27.89	SEP 20	24.53
JAN 20	23.19	APR 20	23.60	JUL 20	26.88		

UMATILLA COUNTY--Continued

455650118241501. Local number 5N/35E-2bad.
LOCATION.--Lat 45°56'50", long 118°24'15", Hydrologic Unit 17070102.
Owner: E.A. Townsend.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Dug irrigation well, size 5 x 5 ft (1.5 x 1.5 m), depth 23 ft (7 m), curbed with concrete.
DATUM.--Land surface datum is 975.82 ft (297.43 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of plank pump support, at datum.
PERIOD OF RECORD.--1933 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.91 ft (3.02 m) below datum, Nov. 28, 1949; lowest measured, dry, several times, 1957-78.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	Dry	FEB 21	Dry	MAY 24	Dry	AUG 21	21.01
DEC 20	Dry	MAR 21	Dry	JUN 20	20.40	SEP 20	Dry
JAN 20	20.59	APR 20	Dry	JUL 20	19.82		

455635118244501. Local number 5N/35E-3add.
LOCATION.--Lat 45°56'35", long 118°24'45", Hydrologic Unit 17070102.
Owner: Van Houten.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Dug and drilled well, dug part 42 x 42 in (1,070 x 1,070 mm), 37 ft (11 m) of concrete cribbing. Drilled and cased to depth of 124 ft (38 m), diameter unknown.
DATUM.--Land surface datum is 958.20 ft (292.06 m) National Geodetic Vertical Datum of 1929. Measuring point: Top east side of well curb, 0.85 ft (0.26 m) above datum.
PERIOD OF RECORD.--1933 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.53 ft (4.12 m) below datum, Sept. 20, 1961; lowest measured, dry several times, 1952-1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	Dry	FEB 21	Dry	MAY 24	37.76	AUG 21	24.42
DEC 20	Dry	MAR 21	Dry	JUN 20	31.62	SEP 20	37.93
JAN 20	38.16	APR 20	Dry	JUL 20	26.66		

455958118244501. Local number 6N/35E-14cad.
LOCATION.--Lat 45°59'58", long 118°24'45", Hydrologic Unit 17070102.
Owner: H. Miller.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Dug well, diam 7 ft (2.1 m), depth 15 ft (4.6 m), cribbed with concrete to 8 ft (2.4 m).
DATUM.--Land surface datum is 789.76 ft (240.72 m) National Geodetic Vertical Datum of 1929. Measuring point: Top east side of concrete curb, at datum.
PERIOD OF RECORD.--1933 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.47 ft (1.06 m) below datum, Aug. 8, 1933; lowest measured, dry Apr. 22, 1966, May 27, 1969.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	11.77	FEB 21	10.75	MAY 24	11.08	AUG 21	11.30
DEC 20	11.32	MAR 21	11.02	JUN 20	11.07	SEP 20	11.14
JAN 20	10.58	APR 20	11.52	JUL 20	10.74		

UMATILLA COUNTY--Continued

455900118274001. Local number 6N/35E-20aca.
LOCATION.--Lat 45°59'00", long 118°27'40", Hydrologic Unit 17070102.
Owner: J.E. Courtney.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Dug and drilled irrigation well, size of dug part 5 x 5 ft (1.5 x 1.5 m), depth 23 ft (7 m), cased with Concrete. Diam, depth, and casing of drilled part unknown.
DATUM.--Land surface datum is 736.32 ft (224.43 m) National Geodetic Vertical Datum of 1929. Measuring point: Hole in top north side of concrete platform, 0.30 ft (0.09 m) above datum.
PERIOD OF RECORD.--1933 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.08 ft (0.33 m) below datum, July 5, 1933; lowest measured, dry, several times, 1961-75.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

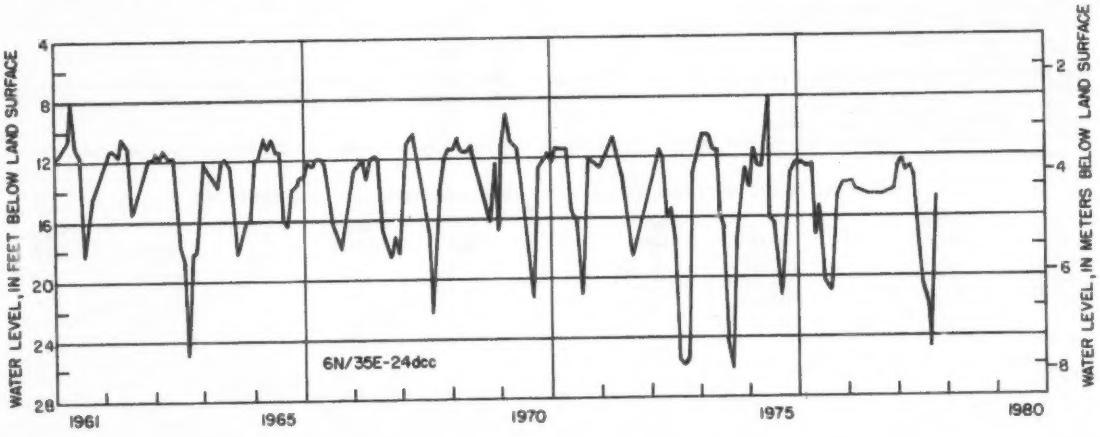
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	12.73	FEB 21	13.50	MAY 24	15.34	AUG 21	17.90
DEC 20	12.25	MAR 21	14.12	JUN 20	17.56	SEP 20	15.51
JAN 20	12.85	APR 20	15.20	JUL 20	15.61		

455840118244501. Local number 6N/35E-24dcc.
LOCATION.--Lat 45°58'40", long 118°24'45", Hydrologic Unit 17070102.
Owner: G. Ransom.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Dug and drilled irrigation well, size 6 x 6 ft (1.8 x 1.8 m) to 10-in (250 mm) diam, depth 165 ft (50 m), cased to 45 ft (14 m).
DATUM.--Land surface datum is 864.30 ft (263.44 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of 4- x 6-in (100 x 150 mm) plank on east side of well curb, 0.50 ft (0.15 m) above datum.
PERIOD OF RECORD.--1933 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.65 ft (2.33 m) below datum, July 29, 1948; lowest measured, 26.04 ft (7.94 m) below datum, Aug. 26, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	14.16	FEB 21	12.98	MAY 24	17.23	AUG 21	a24.75
DEC 20	12.57	MAR 21	12.90	JUN 20	20.85	SEP 20	14.44
JAN 20	12.34	APR 20	13.18	JUL 20	a21.72		

a Well being pumped.



UMATILLA COUNTY--Continued

455830118241502. Local number 6N/35E-26bad.
LOCATION.--Lat 45°58'30", long 118°24'15", Hydrologic Unit 17070102.
Owner: Earl Ranson.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Dug and drilled irrigation well, size 6 x 6 ft (1.8 x 1.8 m) to 8-in (200 mm) diam, depth 46 ft (14 m), dug part cased with concrete.
DATUM.--Land surface datum is 867.12 ft (264.30 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of 4- x 4-in (100 x 100 mm) stringer, 0.48 ft (0.15 m) above datum.
PERIOD OF RECORD.--1933 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.81 ft (2.38 m) below datum, May 25, 1939; lowest measured, 31.37 ft (9.56 m) below datum, Feb. 18, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	28.48	FEB 21	27.32	MAY 24	28.86	AUG 21	a19.52
DEC 20	27.36	MAR 21	27.56	JUN 20	a22.55	SEP 20	15.49
JAN 20	25.82	APR 20	26.98	JUL 20	a23.01		

a Well being pumped.

455745118265001. Local number 6N/35E-28ccd.
LOCATION.--Lat 45°57'45", long 118°26'50", Hydrologic Unit 17070102.
Owner: Lottie McKnight Estate.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Dug unused well, size 7 x 7 ft (2.1 x 2.1 m), depth 29 ft (9 m), cribbed with concrete to 16 ft (4.9 m).
DATUM.--Land surface datum is 817.01 ft (249.02 m) National Geodetic Vertical Datum of 1929. Measuring point: Top north side of concrete curb, at datum.
PERIOD OF RECORD.--1933 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.05 ft (0.62 m) below datum, June 15, 1955; lowest measured, dry, several times 1957-1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	18.82	FEB 21	Dry	MAY 24	25.47	AUG 21	26.40
DEC 20	25.73	MAR 21	Dry	JUN 20	21.94	SEP 20	19.10
JAN 20	Dry	APR 20	25.92	JUL 20	20.12		

455805118293001. Local number 6N/35E-30cbb.
LOCATION.--Lat 45°58'05", long 118°29'30", Hydrologic Unit 17070102.
Owner: Dan Selleck.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Dug domestic well, size 5 x 5 ft (1.5 x 1.5 m), depth 30 ft (9 m), cribbed with concrete to 10 ft (3.0 m).
DATUM.--Land surface datum is 687.21 ft (209.46 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of concrete curb, 0.41 ft (0.12 m) above datum.
PERIOD OF RECORD.--1933 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.10 ft (3.38 m) below datum, June 25, 1946; lowest measured, dry, several times, 1957, 1960-78.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	24.69	FEB 21	30.25	MAY 24	Dry	AUG 21	Dry
DEC 20	26.59	MAR 21	Dry	JUN 20	Dry	SEP 20	Dry
JAN 20	27.01	APR 20	Dry	JUL 20	Dry		

UMATILLA COUNTY—Continued

455740118252501. Local number 6N/35E-34baa.
LOCATION.--Lat 45°57'40", long 118°25'25", Hydrologic Unit 17070102.
Owner: Mrs. Jessie Reese.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Dug irrigation well, size 8 x 8 ft (2.4 x 2.4 m), depth 54 ft (16 m), cribbed with concrete to 20 ft (6.1 m).
DATUM.--Land surface datum is 881.55 ft (268.70 m) National Geodetic Vertical Datum of 1929. Measuring point: Top north side of concrete curb, 0.60 ft (0.18 m) above datum.
PERIOD OF RECORD.--1933 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.65 ft (4.16 m) below datum, May 24, 1939; lowest measured, dry, several times, 1955-1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	49.57	FEB 20	Dry	MAY 24	47.49	AUG 21	a43.23
DEC 20	48.40	MAR 21	Dry	JUN 20	a35.52	SEP 20	38.25
JAN 20	52.59	APR 20	49.59	JUL 20	a39.28		

a Well being pumped.

455728118223501. Local number 6N/35E-36add.
LOCATION.--Lat 45°57'28", long 118°22'35", Hydrologic Unit 17070102.
Owner: Walter Hermann.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Dug domestic well, size 4 x 4 ft (1.2 x 1.2 m), depth 44 ft (13 m), cribbed with concrete to 18 ft (5 m).
DATUM.--Land surface datum is 929.75 ft (283.39 m) National Geodetic Vertical Datum of 1929. Measuring point: Zero of nonrecording float gage, top of concrete curb, 2.00 ft (0.61 m) above datum.
PERIOD OF RECORD.--1933 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.88 ft (1.79 m) below datum, June 20, 1933; lowest measured, dry, Mar. 23, 1967.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	34.92	FEB 21	35.40	MAY 24	35.36	AUG 21	30.30
DEC 20	36.14	MAR 21	36.52	JUN 20	36.21	SEP 20	28.51
JAN 20	35.33	APR 20	37.57	JUL 20	35.29		

455730118231501. Local number 6N/35E-36bab.
LOCATION.--Lat 45°57'30", long 118°23'15", Hydrologic Unit 17070102.
Owner: James Busch.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Dug irrigation well, size 5 x 5 ft (1.5 x 1.5 m), depth 41 ft (12 m), cribbed with concrete to 25 ft (8 m).
DATUM.--Land surface datum is 925.95 ft (282.23 m) National Geodetic Vertical Datum of 1929. Measuring point: Top west side of concrete curb, 2.20 ft (0.67 m) above datum.
PERIOD OF RECORD.--1933 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.75 ft (2.67 m) below datum, June 12, 1950; lowest measured, dry several times, 1963-1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	32.26	FEB 21	27.47	MAY 24	27.29	AUG 21	35.08
DEC 20	25.94	MAR 21	27.50	JUN 20	35.84	SEP 20	27.89
JAN 20	25.62	APR 20	28.59	JUL 20	37.08		

452015119003201. Local number 3S/30½E-1baa.
LOCATION.--Lat 45°20'25", long 119°00'29", Hydrologic Unit 17070103.
Owner: Joe Pedro.
AQUIFER.--Columbia River Basalt Group.
WELL CHARACTERISTICS.--Drilled unused well, diam 6 in (150 mm), reported depth 99 ft (30 m).
DATUM.--Altitude of land surface datum is 3,180 ft (970 m). Measuring point: Top of steel blocks beneath jet connector, 1.00 ft (0.30 m) below datum.
PERIOD OF RECORD.--1953 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.01 ft (6.71 m) below datum, Apr. 16, 1968; lowest measured, 39.81 ft (12.13 m) below datum, May 7, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 16	26.90	MAY 11	23.68	-	-	-	-

UNION COUNTY

452730117595901. Local number 1S/38E-24ddc.
LOCATION.--Lat 45°27'26", long 117°59'50", Hydrologic Unit 17060104.
Owner: H.L. Wagner.
AQUIFER.--Basalt.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 12 to 8 in (300 to 200 mm), depth 1,150 ft (350 m), cased to bottom.
DATUM.--Altitude of land surface datum is 2,750 ft (838 m). Measuring point: Center line of pressure gage, 6.00 ft (1.83 m) above datum.
PERIOD OF RECORD.--1950-74, 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 107 ft (33 m) above datum, Dec. 30, 1951; lowest measured, 53 ft (16 m) above datum, Aug. 13, 1951.

WATER LEVEL, IN FEET ABOVE LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	+81.6	MAY 9	+82.2	AUG 10	+70.7	-	-

452840117580501. Local number 1S/39E-17cad.
LOCATION.--Lat 45°28'34", long 117°57'48", Hydrologic Unit 17060104.
Owner: A.F. Furman.
AQUIFER.--Sand.
WELL CHARACTERISTICS.--Drilled domestic well, diam 4 in (100 mm), depth 46 ft (14 m).
DATUM.--Altitude of land surface datum is 2,735 ft (834 m). Measuring point: Top of coupling on casing, 1.00 ft (0.30 m) above datum.
PERIOD OF RECORD.--1940 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.40 ft (1.34 m) below datum, Feb. 17, 1965; lowest measured, 19.54 ft (5.96 m) below datum, Aug. 29, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	7.49	MAY 9	6.75	AUG 10	16.21	-	-

452003118055101. Local number 3S/38E-6add.
LOCATION.--Lat 45°20'03", long 118°05'51", Hydrologic Unit 17060104.
Owner: City of La Grande.
AQUIFER.--Basalt.
WELL CHARACTERISTICS.--Drilled municipal well, diam 14 in (350 mm), depth 1,391 ft (424 m).
DATUM.--Altitude of land surface datum is 2,790 ft (850 m). Measuring point: Concrete sidewalk, at datum.
PERIOD OF RECORD.--1957-63, 1965-67, 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 125.9 ft (38.47 m) above datum, Jan. 3, 1962; lowest measured, 13.8 ft (4.21 m) above datum, May 14, 1977.

WATER LEVEL, IN FEET ABOVE LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 31	+25.3	FEB 1	+73.8	APR 1	+69.2	JUN 1	+69.2
JAN 11	+69.2	MAR 6	+69.2	MAY 6	+69.2	JUL 20	+64.6

451942118060601. Local number 3S/38E-6dca.
LOCATION.--Lat 45°19'42", long 118°06'06", Hydrologic Unit 17060104.
Owner: Mrs. C.L. Gilstrap.
AQUIFER.--Gravel.
WELL CHARACTERISTICS.--Drilled domestic well, diam 8 in (200 mm), depth 20 ft (6 m), cased to 20 ft (6 m).
DATUM.--Altitude of land surface datum is 2,795 ft (852 m). Measuring point: Top of casing, 2.00 ft (0.61 m) below datum.
PERIOD OF RECORD.--1957 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.50 ft (5.03 m) below datum, Feb. 18, 1958; lowest measured, 21.86 ft (6.66 m) below datum, Aug. 7, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

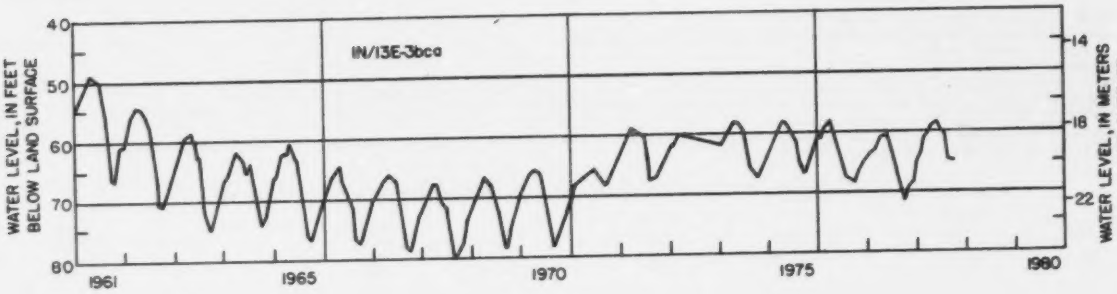
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	18.51	MAY 9	17.14	AUG 10	19.19	-	-

WASCO COUNTY

453608121110301. Local number 1N/13E-3bca.
LOCATION.--Lat 45°36'08", long 121°11'03", Hydrologic Unit 17070105.
Owner: City of The Dalles.
AQUIFER.--Basalt.
WELL CHARACTERISTICS.--Drilled municipal well, diam 12 in (300 mm), depth 200 ft (61 m), cased to 62 ft (19 m).
DATUM.--Land surface datum is 99.5 ft (30.3 m) National Geodetic Vertical Datum of 1929. Measuring point: Hole in pumpbase, 6.40 ft (1.95 m) below datum.
PERIOD OF RECORD.--1926-30, 1960 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.90 ft (5.20 m) below datum, July 19, 1928; lowest measured, 80.63 ft (24.58 m) below datum Aug. 16, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	69.76	JAN 9	62.83	APR 3	59.02	JUL 6	61.66
NOV 7	67.70	FEB 6	60.55	MAY 8	58.45	AUG 5	64.89
DEC 6	64.90	MAR 6	60.04	JUN 6	59.55	SEP 5	64.95



453140121125001. Local number 1N/13E-32acd.
LOCATION.--Lat 45°31'37", long 121°12'50", Hydrologic Unit 17070105.
Owner: Milton Martin.
AQUIFER.--Basalt.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 8 in (200 mm), depth 336 ft (102 m), cased to 44 ft (13 m).
DATUM.--Altitude of land surface datum is about 1,170 ft (357 m). Measuring point: Center line of pressure gage, 1.50 ft (0.46 m) above datum.
PERIOD OF RECORD.--1946 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 186.5 ft (56.8 m) above datum, Apr. 1, 1953; lowest measured, 30.8 ft (9.4 m) above datum, Sept. 14, 1977.

WATER LEVEL, IN FEET ABOVE LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 20	+143.2	MAR 8	+152.5	JUN 6	+136.2	-	-

453715121151701. Local number 2N/12E-25ddc.
LOCATION.--Lat 45°37'15", long 121°15'17", Hydrologic Unit 17070105.
Owner: Ernest A. Kuck.
AQUIFER.--Sandstone of Dalles Formation.
WELL CHARACTERISTICS.--Drilled well, diam 8 in (200 mm), depth 443 ft (135 m), cased to 250 ft (76 m).
DATUM.--Altitude of land surface datum is about 500 ft (152 m). Measuring point: Airline port in pumpbase, 0.80 ft (0.24 m) above datum.
PERIOD OF RECORD.--1947 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 66.20 ft (20.18 m) below datum, May 1, 1955; lowest measured, 151.54 ft (46.19 m) below datum, Aug. 6, 1953.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	118.40	MAR 8	111.72	JUN 7	117.90	-	-

WASHINGTON COUNTY

453514122575801. Local number 1N/2W-8bca.
LOCATION.--Lat 45°35'14", long 122°57'58", Hydrologic Unit 17090010.
Owner: Van Raden Farms. Formerly T.R. Connell.
AQUIFER.--Valley fill.
WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), reported depth 60 ft (18 m), cased to 60 ft (18 m), perforated 28-60 ft (9-18 m).
DATUM.--Altitude of land surface datum is 200 ft (61 m). Measuring point: Top of casing, 0.40 ft (0.12 m) above datum.
PERIOD OF RECORD.--1951 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.30 ft (0.01 m) above datum, Dec. 20, 1955; lowest measured, 26.91 ft (8.20 m) below datum, July 15, 1954.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	21.16	APR 14	6.83	AUG 4	13.95	-	-

453529122535602. Local number 1N/2W-11bab.
LOCATION.--Lat 45°35'27", long 122°54'00", Hydrologic Unit 17090010.
Owner: Albert Zander.
AQUIFER.--Basalt.
WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 125 ft (38 m), cased to 105 ft (32 m).
DATUM.--Altitude of land surface datum is 290 ft (88 m). Measuring point: Top of casing, 1.65 ft (0.50 m) below datum.
PERIOD OF RECORD.--1951 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 57.80 ft (17.62 m) below datum, Mar. 17, 1952; lowest measured, 82.93 ft (25.28 m) below datum, July 17, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	67.87	APR 14	63.07	AUG 4	71.23	-	-

453147122543201. Local number 1N/2W-34ada.
LOCATION.--Lat 45°31'47", long 122°54'32", Hydrologic Unit 17090010.
Owner: Dean Scheel. Formerly E.L. Lewis.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Dug domestic well, size 36 x 36 in (910 x 910 mm), depth 23 ft (7 m), cased with concrete to 23 ft (7 m).
DATUM.--Altitude of land surface datum is 200 ft (61 m). Measuring point: Top of 1½-in (38 mm) vent pipe, 0.50 ft (0.15 m) above datum.
PERIOD OF RECORD.--1951 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.90 ft (0.58 m) below datum, Dec. 20, 1955, Jan. 16, 1961; lowest measured, 19.90 ft (6.07 m) below datum, Sept. 22, 1951.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	18.03	APR 14	3.73	AUG 4	14.58	-	-

453349123062001. Local number 1N/3W-19baa.
LOCATION.--Lat 45°33'46", long 123°06'20", Hydrologic Unit 17090010.
Owner: A.J. Giesbers.
AQUIFER.--Alluvium.
WELL CHARACTERISTICS.--Bored domestic well, diam 6 in (150 mm), depth 56 ft (17 m), cased to 54 ft (16 m).
DATUM.--Altitude of land surface datum is 170 ft (52 m). Measuring point: Top of casing, 0.35 ft (0.11 m) above datum.
PERIOD OF RECORD.--1951 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.79 ft (0.24 m) below datum, Feb. 2, 1967; lowest measured, 12.82 ft (3.91 m) below datum, Nov. 2, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	6.02	APR 14	2.90	AUG 4	4.55	-	-

453117122593402. Local number 1N/3W-36ddc.
LOCATION.--Lat 45°31'17", long 122°59'34", Hydrologic Unit 17090010.
Owner: Terminal Ice Co. Formerly Birdseye Cannery.
AQUIFER.—Sand and gravel.
WELL CHARACTERISTICS.—Drilled unused well, diam 12 in (300 mm), reported depth 171 ft (52 m).
DATUM.—Altitude of land surface datum is 180 ft (55 m). Measuring point: Top of casing, at datum.
PERIOD OF RECORD.--1951 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.02 ft (2.14 m) below datum, Jan. 28, 1970; lowest measured, 22.16 ft (6.75 m) below datum, Sept. 22, 1951.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 14	14.23	-	-	-	-	-	-

453050123081001. Local number 1S/4W-2adc.
LOCATION.--Lat 45°30'50", long 123°08'10", Hydrologic Unit 17090010.
Owner: Myron Sheelar.
AQUIFER.—Alluvium.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 6 in (150 mm), depth 85 ft (26 m).
DATUM.--Altitude of land surface datum is 170 ft (52 m). Measuring point: Top of casing, 0.80 ft (0.24 m) above datum.
PERIOD OF RECORD.--1951 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.81 ft (2.38 m) below datum, Jan. 13, 1959; lowest measured, 16.94 ft (5.16 m) below datum, Nov. 2, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	14.71	APR 14	11.89	AUG 4	16.02	-	-

452328122465201. Local number 2S/1W-14ccc.
LOCATION.--Lat 45°23'28", long 122°46'52", Hydrologic Unit 17090010.
Owner: A.J. Martinazzi.
AQUIFER.—Alluvium.
WELL CHARACTERISTICS.—Dug domestic and stock well, diam 36 in (910 mm), depth 51 ft (16 m), cased with concrete tile to 51 ft (16 m).
DATUM.--Altitude of land surface datum is 160 ft (49 m). Measuring point: Inner lip of casing, at datum.
PERIOD OF RECORD.--1951 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 41.56 ft (12.67 m) below datum, Feb. 18, 1956; lowest measured, dry, July 8, Sept. 26, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

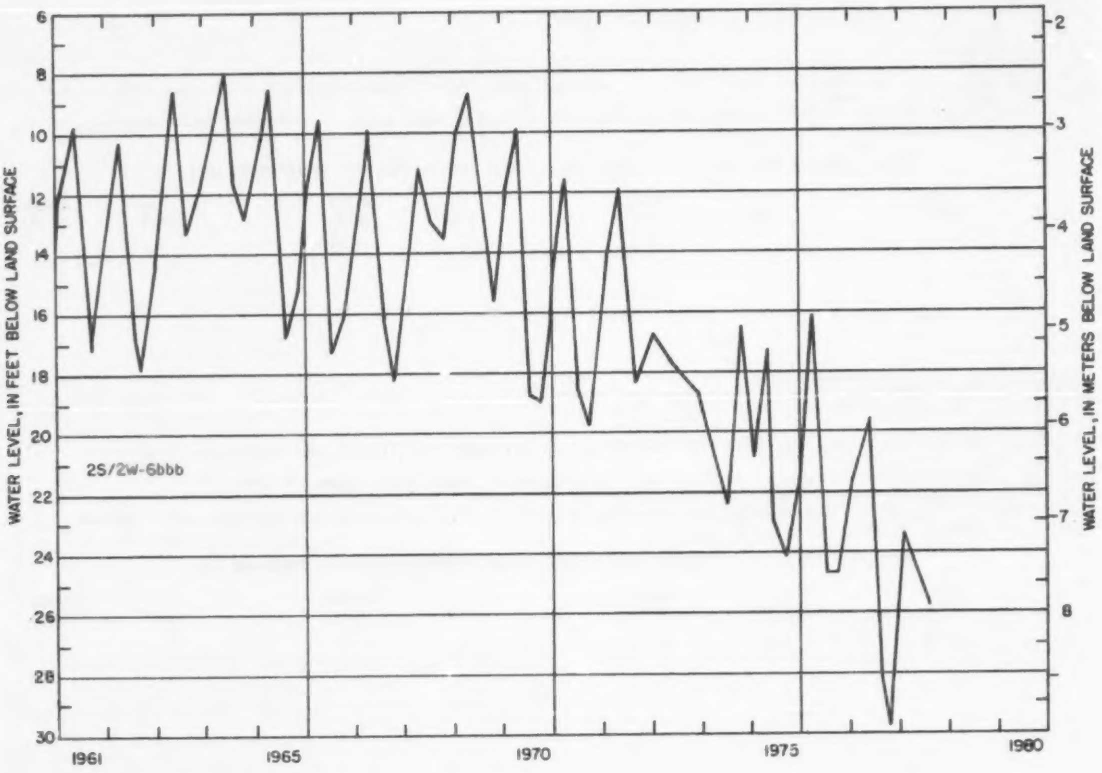
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 9	48.30	APR 3	47.29	-	-	-	-

WASHINGTON COUNTY--Continued

452600122592201. Local number 2S/2W-6bbb.
LOCATION.--Lat 45°25'58", long 122°59'20", Hydrologic Unit 17090010.
Owner: S.R. Rotchstrom.
AQUIFER.--Columbia River Basalt Group.
WELL CHARACTERISTICS.--Drilled irrigation well, diam 6 in (150 mm), reported depth 486 ft (148 m), cased to 250 ft (76 m).
DATUM.--Altitude of land surface datum is 190 ft (58 m). Measuring point: Hole in south side of pumpbase, 0.60 ft (0.18 m) above datum.
REMARKS.--Hydrograph revised for measurements shown in 1974.
PERIOD OF RECORD.--1951 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.66 ft (1.42 m) below datum, Mar. 16, 1951; lowest measured, 29.85 ft (9.10 m) below datum, Oct. 12, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	29.85	JAN 26	23.39	AUG 4	25.74	-	-



YAMHILL COUNTY

450829123143801. Local number 5S/5W-13abc.
LOCATION.--Lat 45°08'29", long 123°14'38", Hydrologic Unit 17090008.
Owner: George Fuller.
AQUIFER.--Sand and gravel.
WELL CHARACTERISTICS.--Drilled domestic and stock well, diam 7 in (180 mm), depth 64 ft (20 m).
DATUM.--Land surface datum is 151.09 ft (46.05 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.50 ft (0.15 m) above datum.
PERIOD OF RECORD.--1928-30, 1935-36, 1938 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.25 ft (2.52 m) below datum, Apr. 1, 1963; lowest measured, 28.67 ft (8.74 m) below datum, July 8, 1977.

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JAN 9	14.84	APR 3	16.98	SEP 26	16.98	-	-

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54x10^{1}	millimeters (mm)
	2.54x10^{-2}	meters (m)
feet (ft)	3.048x10^{-1}	meters (m)
miles (mi)	1.609x10^{0}	kilometers (km)
	Area	
acres	4.047x10^{3}	square meters (m^2)
	4.047x10^{-1}	square hectometers (hm^2)
	4.047x10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590x10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785x10^{0}	liters (L)
	3.785x10^{0}	cubic decimeters (dm^3)
	3.785x10^{-3}	cubic meters (m^3)
million gallons	3.785x10^{3}	cubic meters (m^3)
	3.785x10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832x10^{1}	cubic decimeters (dm^3)
	2.832x10^{-2}	cubic meters (m^3)
cfs-days	2.447x10^{3}	cubic meters (m^3)
	2.447x10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233x10^{3}	cubic meters (m^3)
	1.233x10^{-3}	cubic hectometers (hm^3)
	1.233x10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832x10^{1}	liters per second (L/s)
	2.832x10^{1}	cubic decimeters per second (dm^3/s)
	2.832x10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309x10^{-2}	liters per second (L/s)
	6.309x10^{-2}	cubic decimeters per second (dm^3/s)
	6.309x10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381x10^{1}	cubic decimeters per second (dm^3/s)
	4.381x10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072x10^{-1}	megagrams (Mg) or metric tons